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Reasons for Complementary and Alternative Medicine Usage in Japanese Americans

Theodora Stratis

LOMA LINDA UNIVERSITY
Graduate School

Reasons for Complementary and Alternative Medicine Usage in Japanese Americans

by

Theodora Stratis

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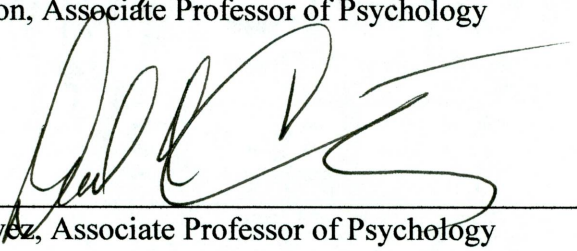
Each person whose signature appears below certifies that this thesis in his/her opinion is adequate, in scope and quality, as a thesis for the degree of Master of Arts.

, Chairperson

Kelly R. Morton, Associate Professor of Psychology



David V. Chavez, Associate Professor of Psychology

Louis E. Jenkins, Professor of Psychology

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ABBREVIATIONS

CAM	Complementary and Alternative Medicine
AVS	Asian Values Scales
IBQ	Illness Behaviors Questionnaire
SEM	Structural Equation Modeling

ABSTRACT OF THE THESIS

Reasons for Complementary and Alternative Medicine Usage in Japanese Americans by

Theodora Stratis

Master of Arts, Graduate Program in Psychology
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Dr. Kelly R. Morton, Chairperson

Complementary and Alternative Medicine (CAM) has received much research attention in the last several years due to marked increase in usage in the U.S. To date, findings indicate that 34% of adults in the U.S. report using at least one form of CAM for the maintenance of general health and acute symptoms and such use continue to increase (Astin, 1998; Eisenberg et al., 1993). CAM therapies are also used by those who suffer from chronic physical and psychological symptoms not successfully treated by conventional medicine (Testerman et al., 2004). Though researchers have examined who is using CAM and why they are using it, few have examined these issues within ethnic samples such as in Asian Americans. The Asian American population is important to investigate for much of what comprises CAM originates from Asian cultural traditions. The Asian Values Scale (Kim et al., 1999), Illness Behavior Questionnaire (Pilowsky, 1969), and 3 vignettes adapted from Crock et al. (1999), were used to investigate the relationship between Asian cultural values, Asian health beliefs and CAM usage for psychological, somatic, and physical symptoms in sixty-nine Japanese-Americans. Results demonstrated an association between a marked concern about one's health with less acculturation, education, income and poor perceived health. Results also demonstrated that Japanese-Americans who adhere to Asian cultural values will use CAM when they are feeling a significant amount of distress about their health.

Furthermore, it was found that when they begin to worry about the state of their physical health in particular, they are more likely to use CAM. Limitations of the study, research implications, and treatment implications are discussed.

Introduction

Asian Medicine

Chinese medicine has been in use for more than 2000 years and is based on a different model of health than Western medicine. While Western medicine is based on the Cartesian model which sees the mind and body as separate entities, Asian medicine has always regarded them as one (Lin, 1980). Chinese medicine is based on a philosophy of nature; by observing patterns in the natural world, the dynamics of human nature can be known. Life arises from the interplay of the polar forces Yin and Yang. Just as these forces are intertwined with each other, so are all living processes. Thus, good health results from the proper balance of these contending forces. Good health is also considered to be the ability of a person to respond appropriately to a wide variety of challenges while maintaining equilibrium, integrity, and coherence (Beinfield & Korngold, 1991). Because ontology and pathology are closely linked to each other, how a person gets sick is inextricably connected to who they are. In Chinese medicine, diagnoses identify imbalances, while treatment seeks to restore harmony. While in Western medicine, diagnoses seek to identify the name of the disease, the goal of Chinese medicine is to recognize the patterns of disharmony within a person. Language also plays an integral part in Chinese medicine for it reflects the philosophy of nature on which it is based. Just as a landscape consists of air, river, and soil, the body consists of five basic constituents: Shen (mind), Qi (pronounced *chee)*, Moisture (body fluids), Blood (tissue), and Essence (reproduction and regeneration). Out of these five

constituents, Qi is considered to be the most vital, for it refers to vital functioning (like movement and warmth) as well as the sum of a person's life force.

There are different forms and different types of Qi, all of which function to transform, transport, contain, lift, protect, and warm the body (Beinfield & Korngold, 1995). Good health exists when there is an adequate flow of Qi distributed equitably and smoothly with Moisture and Blood: Blood regulates tissue, Moisture generates fluid, and Qi initiates the activity of the body in the process of forming itself. The body is completely dependent on this interaction. Illness is understood then as a consequence of either depletion or congestion of Qi with Moisture and Blood. Depletion can lead to symptoms of weakness, fatigue, or frequent illness, while congestion can result in stiffness, pain, abdominal distension, or irritability.

Nature can also be further differentiated into five primal powers: wood, fire, earth, metal, and water. Correspondingly, the body is divided respectively into five functional systems known as the Organ Network. It consists of the liver, heart, lung, spleen, and kidney. Each Organ Network refers to a complete set of functions, physiological and psychological, rather than to a specific and discrete physical structure fixed in an anatomical location. In Western physiology, thoughts and feelings are localized in the brain, while in Chinese physiology the two exist in the Organ Networks. Their expressions are attributable to the character of the Organs and their reciprocal interactions. Thus, emotions affect the state of each Organ Network and by treating them, emotional and mental processes can be modulated and enhanced (Beinfield & Kornfield, 1995).

In nature, extreme wind, dampness, dryness, heat, and cold can affect the environment in severe and harsh ways. These same forces can also create imbalance within the human body, weakening or obstructing the movement of Qi in the Organ Networks. Chinese medicine identifies these as body climates: internal and external pathogenic agents that can also contribute to the congestion or depletion of the body constituents (Beinfield & Korngold, 1995). For example, when fire burns the skin, it causes redness, swelling, and pain. When these symptoms arise spontaneously, they are due to the pathogenic influence of internal fire or Heat. The source of this fire cannot necessarily be seen, but its effects can be observed. Because heat produces inflammation and agitation, such symptoms are referred to as signs of Heat. Another example includes Dampness, which appears as swelling and a sense of heaviness or fullness. It can appear on the surface of the body in many forms such as oily skin, or sticky perspiration.

During diagnosis, the practitioner seeks the imbalance of yin and yang that is causing the patient's symptoms. By perceiving the patient as an ecosystem, the practitioner can assess the quantity and quality of the Qi as it affects the Body Constituents and Organ Networks. The practitioner focuses on the interruption or blockage of Qi and uses himself as an evaluative instrument, using his senses to determine the essential information necessary to formulate a diagnosis and treatment. This is done by questioning and observing the patient and by taking his or her pulse. In general, the Qi is to flow smoothly along its own bodily channels or meridians but can be blocked by environmental stress, faulty eating habits, or careless behavior patterns. Thus, learning about the patient's behavior and lifestyle practices also plays an important part in diagnosis and treatment.

Treatments can involve a range of therapies such as acupuncture, herbal medicines, or massage. There is much emphasis on follow-up and prevention of further illness and prognosis is usually positive if the instructions are followed diligently. Chinese practitioners usually treat patients in their offices but will sometimes do home-visits. A quiet and comfortable place is created for diagnosis and treatment. Chinese practitioners may also include medical professionals and other traditional healthcare professionals in the treatment process. During treatment, the patient is expected to cooperate with the Chinese practitioner—to relax and not resist. The patient is to "flow" with treatment and avoid tension that would disrupt the flow of the Qi. Patients are expected to obey the Chinese practitioner and follow any treatment or regimen prescribed to balance the yin and yang forces. Other factors that are included in the treatment process are the involvement of family members and at times community members. Both are considered to be an important part of the healing process for they are seen as mirroring both the macrosystem of the universe (the community) and the microsystem of the body (the family). Including all of the facets of a person's life in treatment, such as lifestyle habits, eating habits, and the involvement of family and community members reflects that the goal of the Chinese medical model is much broader than the Western medical model to promote harmony within the body and between the patient and environment.

Japanese Medicine

Traditional Chinese medicine has been deeply rooted in Japanese culture for a thousand years (Audet, 1994). By contrast, Western medicine has only been in use in Japan for about 200 years. Although the basic foundations are the same as Chinese

medicine, Japanese medicine has developed its own distinctive medical culture. Of the many Chinese medical practices, acupuncture and Chinese herbology are two treatments that have been absorbed by Japanese culture. The Japanese have refined, improved, and validated the original Chinese formulas and have developed substantiated techniques of healing. The Japanese equivalents of these two Chinese treatments are Shiatsu and Kampo Herbology.

Shiatsu is a traditional Japanese massage therapy based on acupuncture principles. In traditional Chinese acupuncture, sterile, slender stainless steel needles are inserted into pressure points of the skin to access the Qi. In Shiatsu the therapist applies pressure on the acupuncture points or meridians with their fingers, elbows, and/or their knees to access the Qi. Shiatsu is very effective for people who have minor health problems or want relaxation or stress release.

Kampo herbology has played an important role in Japanese healthcare and represents the majority of annual drug sales in Japan. As with Chinese medicine, Kampo also assumes a holistic approach to health is necessary; it recognizes that a dysfunction in a particular part of the body is a reflection of disharmony and seeks to enhance the body's own healing power and restore its natural balance. This is different from the Western view of medicine in which the primary goal is to eliminate or control pathogenic processes.

Kampo are combinations of multiple raw herbs that are usually taken orally as a liquid concoction after being boiled in water. However, in recent years they have been made into granules or tablets for easier consumption. Herbs such as licorice, ginger, cinnamon, or rhubarb, as well as herbs indigenous to Japan, such as the Japanese

Angelica are found in Kampo formulations. Since the formulas are a combination of many different herbs, it can contain a large number of chemical substances that interact with each other for multiple effects. Thus, the overall effect of the formula is quite different from the combined effects of the individual raw herbs. The selection of ingredients used for each treatment is determined by both the patient's symptoms and other factors that include resistance, general condition and strength. Thus the same disease may be treated with different formulas depending on the patient. The gentle and multiple active substances in Kampo make it ideal for common complaints such as dry cough or constipation as well as for more serious symptoms such as hypertension or liver dysfunction. Kampo is even recommended for people who have had adverse reactions to Western medicine. The effects of both Chinese and Kampo herbology are unique and clinically based making it very difficult for Western scientists to understand the biochemical structures and interactive mechanism involved with each formula.

In present day Japan, Kampo medicine is still being used by physicians who have been trained in Western medicine. A national license is required to practice acupuncture, kampo, and shiatsu. During a typical examination a patient is diagnosed and treated in both Western and Kampo medicine. First, the patient is examined using Western medicine followed by a second, more holistic examination using Kampo based techniques. This method has been referred to as the "combined therapy" which also distinguishes Japanese medicine from Chinese medicine. In this way, Kampo medicine is continually being integrated with Western medicine.

Asian Health and Psychological Beliefs

As stated above, the concept of health in Asian cultures is seen as the mind and body being interdependent rather than separated. Therefore, health is achieved through a harmonious balance that requires a synthesis within and between individuals, society, and the universe. Balance is experienced by having an integration of both a physical and mental state of well-being; this balance is continually strived for throughout a person's lifetime. When a person achieves this harmonious state, it is considered to be mastery. Similar to many other ethnic groups, there are also forces that disturb this balance such as exposure to cold, drafts and wet weather, punishment for violating norms or moral and religious taboos, punishment for offending God, experiencing anger, stress, or anxiety in relationships, and supernatural factors such as having "bad blood" or being cursed (Klonoff & Landrine, 1994; Landrine & Klonoff, 1992). The restoration of balance is seen as a long-term, highly personal and cooperative process in which healer, patient, and family atone for wrong doings and improve on the habits and relationships that are construed to be the cause of the illness (Kleinman, Eisenberg, & Good, 1978). Therefore, having good balance in interpersonal relationships is an indicator of good mental health. Asians assign a high priority to maintaining harmonious interpersonal relationships (Hsu, 1985). In China and Japan, people attend closely to the social order maintained through structured relationships and emphasize the importance of polite and pleasant interpersonal interaction (Hwang, 1987). The basis for understanding this comes from the Asian cultures' collectivist orientation.

Collectivistic cultures, in general, emphasize in-group goals rather than individual goals and make clear distinctions in treatment of in-group and out-group members,

whereas the reverse is true for individualistic cultures (Triandis, 1994b). The collectivists' emphasis on harmony within the in-group is also associated with saving face, avoiding conflict, and smoothing interactions (Gudykunst & Nishida, 1994; Ting-Toomey, 1988; Ting-Toomey, Trubisky & Nishida, 1989). Members are expected to subjugate their own desires and needs to the group, even sometimes to make personal sacrifices for the group. For example, Japanese society deemphasizes individual achievements and assigns the success of the work group a high priority (Berrien, 1965). This orientation rests on the principle of reciprocity; members share responsibilities and obligations. Pressure toward conformity is exerted when individuality is expressed; therefore, it is discouraged. In return for conforming, members are assured of economic and psychological security that is inaccessible to those who choose not to conform. Because basic needs are met by group members, it becomes necessary to maintain good relationships within the group (e.g., society, family, and other in-group members).

Good interpersonal relationships are therefore related to good emotional adjustment and mental health. Suan and Tyler (1990) found that Japanese subjects generally rated negative personality traits such as having poor interpersonal relations and being untrustworthy as strong indicators of poor mental health. These findings are consistent with previous studies (e.g., Hwang, 1987) that demonstrate that Asians assign great importance to maintaining harmonious interpersonal relationships and that this balance is perceived to be an indicator of good mental health which ultimately preserves physical health.

Because in-group harmony is pivotal to mental and subsequently physical health, and because good relationships are seen as pivotal to mental health, any mental health

problem carries a great deal of stigma in Asian society. This negative perception of mental illness affects how one approaches and copes with emotional problems. Typically, one handles emotional or psychological problems delicately and indirectly. When a person experiences emotional stress, they are expected to seek support within themselves and family conflicts are expected to be resolved within the family. Mental illness of family members, especially severe disorders involving violence or suicidal behaviors are considered a family shame that should not be revealed. Root (1985) states that talking to an outsider, such as a mental health professional, is discouraged for it may bring disgrace upon the family. The family may try to resolve their problems on their own, believing that mental health can be maintained by avoiding bad thoughts and exercising will power (Root, 1985).

This may seem to be inconsistent with the Eastern belief that good health and interpersonal relationships are achieved through a balance of harmony; how is it possible that this integral part of emotional wellness is ignored? Specifically, if a balance of harmony in interpersonal relationships is highly desired, it would seem that handling emotional or psychological problems would be dealt with by actively addressing the issues rather than keeping the problem to themselves and/or within the family to solve. Because a lack of emotional control or psychological illness is looked down upon within the culture, trying to deal with it alone is seen as the only viable option to avoid bringing shame and disgrace upon the individual or the family. Overall, the cultural implications of a collectivistic culture are such that how an individual handles their personal problems can greatly affect how the group will respond to that individual. For example, if people in the community find out that there is mental illness within a particular family, people

may choose not to associate with that family or ostracize that person and family. This may also explain why people choose to exhaust all other options (e.g., such as trying to handle problems on their own) before seeking professional help.

A very common way for an individual to express emotional distress in a culturally appropriate way is through somatic symptoms; the uses of somatic symptoms are culturally sanctioned "idioms of distress" (Kleinman, 1988). Somatization allows a person to focus on physical discomfort while ignoring or suppressing the report of emotional symptoms. Making emotional symptoms physical allows a person to handle them in an indirect and safe way that will not bring shame upon them. Somatic symptoms are not the result of unconscious denial because people are generally aware of the problem's true emotional origins. For example, in several studies conducted by Cheung (1982, 1985), it was found that although somatic complaints were the focus for patients when visiting a physician, they were very aware of their emotional problems and stresses derived from social relationships that might cause their emotional and somatic symptoms. This finding suggests that many patients will selectively present their somatic symptoms because they perceive this to be an appropriate focus while in health care settings. Cheung and Lau (1982) found that students in Hong Kong were less likely to express distress as a somatic idiom when they were with close friends and more likely to do so when in a clinic where they perceive somatic idioms to be expected.

The perceptions of mental health problems and how they are dealt with reflect a pattern for help-seeking behaviors in the Asian culture. It has been assumed in the past that Asians were the "model minority group" because of their low utilization of mental health services. However, when closely examined, Asians rarely utilized services

because they often do not reach the service systems until their condition is extremely severe and all other existing resources have been exhausted (Gaw, 1982; Lin, 1983; Lin & Lin, 1978; Sue & Morishima, 1982). For example, Asian patients with schizophrenia did not reach the mental health system until three years after the initial onset of psychotic symptoms (Lin, Inui, & Kleinman, 1982). Regardless of how serious the situation is, Asian people will seek professional help when they feel that they cannot do anything more on their own; up until that point, they will continue to use more traditional methods of healing such as acupuncture, kampo, or traditional healers, all of which are based on cultural health beliefs that focus on the maintenance of the mind and body. Because these approaches to healing are focused on mind-body connection rather than a Western medical approach that focuses on healing a specific symptom, traditional practitioners are able to prescribe remedies that are not only culturally appropriate but address the physical and psychological components of a person's life at the same time. Patients can feel safe and understood in this environment for the traditional practitioner will understand the patient descriptions of symptoms within the language of the culture such as through a somatic idiom. Physicians following a Western medical approach may not understand the Asian cultural values that underlie the symptom presentation when discussing and treating psychological problems.

Japanese Perception of Mental Illness

Similar to many Asian groups, the Japanese have negative perceptions of mental illness. They see the causes of mental illness as a lack of will power, morbid thinking, and poor interpersonal relations (Arkoff, Thaver, & Elkind, 1996; Narikiyo & Kameoka, 1992; Root, 1985; Suan & Tyler, 1990) while emotional restraint (Root, 1985), self-

discipline, concealment of personal frustrations, and subjugation of concerns to the needs of the group (Henkin, 1985) are seen as a means of maintaining healthy relationships. Because of these cultural values, Japanese Americans may try to resolve mental health problems on their own by avoiding bad thoughts and exercising will power (Root, 1985). Since a certain amount of self-control during difficult times is encouraged, there is a tendency to be reticent about displaying emotions that may reveal information about one's private life.

There is also great stigmatization attached to mental illness and emotional problems. Studies have shown that in Japan, the behaviors of people with mental illness are perceived as unpredictable, dangerous, and not likely to make a social readjustment (Munakata, 1990; Okagami, Oshima, & Arai, 1988). Such stigmatizations pervade all aspects of society and usually have severe consequences. For example, there has traditionally been much emphasis on the maintenance of family name and honor in order to avoid adverse social consequences. It was not uncommon for marriages to be arranged between families of similar social status and economic background. A person whose family had hereditary medical illnesses, mental retardation, or mental illness among any of its members would usually make a poor match or no match at all. Due to this belief, the presence of a mentally ill person in the family is usually kept confidential to avoid negative social consequences for other healthy family members (Yoshimatsu & Koizumi, 1993). According to McDonald-Scott, Machizawa, and Satoh (1982), there is even reluctance among Japanese psychiatrists to disclose the diagnosis of schizophrenia or other psychological disorders to the patient because of the psychiatrist's sense of responsibility to protect their patients from the strong prejudice against them in the

community. Because of this fear, the Japanese are more reluctant to acknowledge a need for help and treatment (Sue & McKinney, 1975; Sugiura, Sakamoto, Tanaka, Tomoda, Kitamura, 2001). Therefore, help is more often sought from alternative sources rather than from medical professionals (Sue & Morishima, 1982; Tseng, 1975). One source is talking to family and/or friends and spending time/socializing with others (Atkinson, Whiteley, & Gim, 1990; Lin, Inui, Kleinman, & Womack, 1982; Lin, Tardiff, Donetz, & Goresky, 1978; Suan & Tyler, 1990). Another source is seeking help from traditional practitioners and folk healers which may be sought before utilizing mental health services and even after entering professional care (Lin & Cheung, 1999).

Like other Asians, the Japanese also express psychological and interpersonal distress somatically. It is considered socially and culturally acceptable for all but hereditary physical illness to be expressed openly, while psychiatric ones must be hidden (Ohnuki-Teirney, 1984; Rogers and Izutsu, 1980). For example, headaches and fatigue are often seen as culturally acceptable expressions of depression (Marsella, 1993) while psychiatric diagnoses for anxiety and depression are not. What often occurs is that the Japanese individual will seek out traditional care first, whether it is self care or the guidance of a traditional practitioner, because this is considered an acceptable way of dealing with problems. Because traditional care is often used to treat physical ailments, an individual may feel safe in bringing their somatic complaints to their traditional practitioner; it will not be considered unusual by others and there is relatively little concern about the negative social consequences because the symptom is seen by others as a physical complaint.

However, the consequences of dealing with emotional difficulties in this manner are such that psychological distress may not be adequately treated or addressed. Because there is such stigma regarding psychological problems in Asian culture, a patient who has somatic complaints may never address the core problem even if they have the guidance of a physician or traditional practitioner. In other words, somatic complaints and the monitoring of those complaints can become a focal point to avoid emotion, possible social consequences, and effectively treating the problem. A Japanese person may become highly sensitized to their physical condition the more they accept cultural values regarding expressing emotional distress and the social consequences of this expression. These practices may lead to maladaptive perceptions, evaluations, and actions relating to one's health, or abnormal illness behaviors (Pilowsky, 1969), despite the assurances and guidance of physicians and traditional practitioners. As a result, inappropriate treatment-seeking motivated by the fear of severe disease and negative social consequences may be perpetuated. For example, some people may abuse medical services, waste time in seeking treatment or receive inappropriate treatment from their physician or use a vast array of self care rather than seek out a mental health professional; these illness behaviors mask the emotional problem and may further impede access to mental health professionals (Barsky, Wyshak, & Klerman, 1986; Barsky, Wyshak, Latham, & Klerman, 1991).

Self Care

Several terms will be employed throughout this manuscript that requires definition for clarity. Self care will be used to indicate a response to health that does not involve professional medical care. CAM will be defined as a wide variety of alternative

healing methods which are separate from conventional scientific medicine (e.g., acupuncture and herbal therapy) that may be used for maintaining health or for treating specific illnesses. They are often used in place of, or in conjunction with, conventional medicine. Western/conventional medicine will be defined as diagnostic and therapeutic concepts and practices which adhere to and employ modern scientific principles, and techniques. Traditional medicine will be defined as indigenous diagnostic and therapeutic practices, which may or may not be formal and systematic and which form an integral part of culture.

Self care is the most common form of response to perceived symptoms of illness throughout the world. It can be defined as a response behavior to a perceived symptom without the involvement of physicians (Haug, Akiyama, Tryban, Sonoda, & Wykle, 1991). These responses may include taking over-the-counter medication or resorting to various forms of self-treatment and care provided by lay persons, such as family members, without concurrent medical advice, or deciding to do nothing.

Self care can best be understood within the framework of the Health Belief Model (Hochbaum, 1958; Rosenstock, 1966, 1974) which addresses why people practice certain health behaviors. This model posits that whether a person practices a particular health behavior is determined by two factors: (1) the degree to which the person perceives a personal health threat, and, (2) the perception that a particular health practice will be effective in reducing that threat. When an individual decides to use self care, they must first appraise their susceptibility to a personal health threat. If they feel there is no perceived threat, individuals will resort to self care. People who perceive their health to be good and who are not affected by psychological distress have more confidence in their

health and care for their ailments without resorting to professional help. Conversely, people with chronic conditions or who experience high numbers of symptoms may view themselves as being in poor health and thus in need of a doctor's advice. Secondly, a person's attitudes concerning the efficacy of a particular health practice reducing a health threat can influence their health care choices. These attitudes may include their faith in doctors, their claimed experience with medical error, and self reliance in health care. For example, negative attitudes about the efficacy of physician care will make a person favor self care. Instead of believing in the benefits of consulting with a health professional, belief in the ineffectiveness of such an action may lead to self treatment. Low efficacy in the effectiveness of Western medicine to heal and the perception of low personal health threat will lead a person to self care.

Cross-cultural studies of self care, particularly between the U.S. and Japan, have shown cultural differences that affect self care decisions. Haug et al. (1990) have found that in both countries, persons who self-assessed their health more frequently, who practiced fewer good health behaviors, and perceived their personal health as a threat relied more on self care. Also, the presence of chronic symptoms led to more self care in the U.S. but the absence of it led to self care in Japan. In Japan, people reported fewer symptoms but engaged in less good health behavior (e.g., diet, sleep and exercise, use of cigarettes and alcohol) and they used more of both physician care and self care than people in the U.S. Although they do this, they also place a high priority on health maintenance and medical care (Steslicke, 1987). The effects of poor dietary habits, indulgence in cigarettes and alcohol and lack of exercise do not necessarily result in immediate ill health, though they do negatively impact cardiovascular disease and cancer

in the long run. Although self care is done differently in both Japan and in the U.S., people in both countries who perceive their health as a high threat and have high efficacy in Western medicine will seek the help of a health professional while those who perceive their health as good and have low efficacy in Western medicine will do self care.

The much higher rate of exclusive physician consultation combined with an even larger reliance on self care in Japan may seem like an anomaly but it is actually indicative of a focus on good health that is more central to the culture of Japan than it is in the U.S. Eastern health beliefs and practices are deeply rooted in traditional Japanese health care. Such beliefs and practices attribute health problems primarily to the imbalance in body homeostasis and focus their therapeutic efforts on restoring the balance by holistic methods such as shiatsu and kampo. Self-reliance and personal autonomy is encouraged in Eastern medicine which requires a more active involvement and constant monitoring of one's health and well-being by patients and their families compared to the Western medical model. This may explain why the Japanese are very sensitive to the condition of the body, the management of its care (Caudill, 1976) and how they will selectively use professional and/or self care as they consider how to treat specific symptoms.

However, once an individual seeks professional help, they give up a certain degree of personal autonomy within the doctor-patient relationship. The doctor-patient relationship is seen as a hierarchical relationship in which one's dependency upon the doctor must be expressed (Powell & Anesaki, 1990). This relationship dictates that a person will not be afforded personal autonomy in health decisions and must depend primarily on their doctor for guidance. The patient does not expect equality in the relationship or to be completely involved in the decision making process regarding their

health. Due to the loss of personal autonomy upon establishing this relationship, Japanese patients avoid the use of physicians except when absolutely necessary. It is when the symptoms are considered serious enough or the patient feels that their own knowledge is inadequate to remedy their ailments, that they are willing to relinquish their autonomy and seek professional help (Long, 1980). However, this does not mean that the individual will stop using various forms of self treatment. Eastern health beliefs dictate that Japanese people be aware of their personal health and continue to use various forms of self treatment even though they are seeing a physician. The continual use of self care reflects the underlying belief that health is based on maintaining harmony and balance throughout a person's life. This belief pervades all aspects of daily life and is not reserved for periods of illness. This may explain why individuals continue self care while simultaneously seeing a physician. It is important for physicians to understand that it may be very difficult for a Japanese patient, regardless of their social position or education, to simply cast aside an important part of their cultural heritage in favor of Western concepts, particularly during the vulnerable times of illness.

Complementary and Alternative Medicine

Complementary and Alternative Medicine (CAM) is deeply rooted in Asian medicine. It is only in recent years that CAM has shown increasing popularity in Western culture. People have come to use CAM as part of their daily regimen or in combination with conventional medicine. A common definition of CAM is an intervention neither taught widely in medical schools nor generally available in the U.S. (Eisenberg et al., 1998). However, CAM therapies are theoretically focused on a holistic model of care of the whole patient; the body, mind, emotional and spiritual dimensions of

a person are examined. Conventional medicine, on the other hand, adopts a more biological approach and focuses solely on a specific disease or symptom rather than the whole person.

A holistic approach to healing has become increasingly popular among patients. It has been shown that people with a wide array of symptoms seek CAM therapies. In a national survey, it was found that the heaviest users of CAM were White, educated, and had higher incomes (Eisenberg et al., 1998). While CAM users saw both a medical physician and CAM practitioner simultaneously, most did not consult or inform their medical doctor about their simultaneous Western medicine and CAM use. Due to the increased research on CAM, it is also known that more and more people with chronic illnesses are using CAM therapies. For example, high CAM users include those suffering from arthritis, cancer, depression, panic disorder, Parkinson's Disease, pain and glaucoma (Asher, Seidman, & Synderman, 2001; Jacob, Kraaimaat, & Bijlsma, 2001; Kaboli, Doebbeling, Saag, & Rosenthal, 2001; Unutzer, Klap, Sturm, Young, Marmom, Skatkin, & Wells, 2000; Rajendra, Thompsom, Reich, 2001; Rhee, Katz, Spaeth, & Myers, 2001).

Several explanations have been posited as to why these groups of people may seek CAM therapies. One hypothesis posits that patients seek CAM because they desire more personal control over their health and illness (Astin, 1998). CAM therapies allow patients to actively participate in their healthcare decisions by allowing them to do their own research for appropriate CAM therapies, while conventional care is more passive with patients obtaining a diagnosis and prescription directly from a physician with much less participation. Thus, being able to make decisions about one's health may bring about

a sense of empowerment and security for the patient. However, it has been revealed that the desire for more personal control over one's health care does not seem to be an issue for people using CAM. It has been shown that those patients with chronic illnesses were most likely to relinquish their personal control over to a powerful other (e.g., a physician or other people in the patient's life) than individuals in good health (Testerman, Morton, & Ronan, 2000). As an individual's illness becomes more serious, something they can't handle on their own, they are more likely to relinquish their personal control to their physician. This explanation is also seen across cultures as demonstrated earlier in the Japanese culture; they are more likely to seek the guidance of a physician and give up their personal autonomy when they feel that they are not able to handle their health on their own or when it becomes serious.

Patients may also seek CAM because of their dissatisfaction with conventional medicine to adequately address their medical condition. For example, head and neck cancer patients are likely to seek CAM therapies that have fewer side effects and that ameliorate the side effects of conventional cancer treatments (Asher et al., 2001). Also, the heaviest CAM users were those who had the most symptomatic problems and were suffering from depression and arthritis, two problems that are often not adequately addressed by conventional medicine (Testerman et al., 2000). This suggests that CAM usage is sought when patients feel that conventional medicine has been ineffective in relieving chronic symptoms.

Finally, patients seek CAM for care because it is consistent with a holistic philosophy regarding health and illness. Western medicine has typically focused on the disease or illness as a pathological entity that is the object of treatment (Eisenberg, 1997;

Engel, 1977). An illness or disease is seen as an intrapersonal event in which the individual will seek limited services from an expert trained in the diagnosis and treatment of an illness (Landrine & Klonoff, 1992). Illness in this curing relationship can be described and treated without reference to family, community, or spiritual factors. Because modern medicine views an ill body as a machine with broken parts that need to be fixed, many physicians ignore the emotional or spiritual factors of their patient's illnesses and may not address the reasons the patient is really suffering (Engel, 1977).

The focus of CAM lies in the whole person not the disease, and it addresses the imbalance in a person's body and mind and life context (Seem, 1987). Thus, a CAM practitioner seeks to understand and treat a person's body and mind in an integrative manner (White, 2000). Treatment is viewed as a long-term, highly personal and cooperative process in which the practitioner and patient work on "wrongdoings" and improve habits and relationships which are construed to be the cause of the illness (Fabrega, 1974; Kleinman, 1980; Kleinman, Eisenberg, & Good, 1978). Treatment also addresses factors that are specific to the patient, which include the restoration of inner balance and harmony within their life. It is the maintenance of this balance that is seen as an integral part of health. CAM therapies are unlike Western medical care in that it allows the person to choose for themselves which therapy might be appropriate for them. If they choose to seek the guidance of a CAM practitioner, the individual knows that they will be able to work collaboratively with the practitioner throughout the treatment process. If they choose to use kampo or a form of therapy not prescribed by a CAM practitioner, they are able to monitor their health on their own.

The increasing popularity of CAM may be due to the fact that it acknowledges that illness should be treated within a larger context that includes the uniqueness of an individual, spirituality and life meaning. While many studies (e.g., Astin, 1998) have examined CAM usage in healthy populations, other studies have examined a patient population whose illnesses were unrelieved by conventional medicine and were imposing a heavy burden of suffering, such as depression and arthritis (Testerman et al., 2000). It was found that those patients with the most severe and chronic symptoms did use more CAM, especially if they held holistic health beliefs. People subscribing to these beliefs and having such experiences have been described as being open to new ideas of self-actualization, inner change, psychology, and spirituality (Astin, 1998). Increasing CAM usage may also reflect a change in our society towards more acceptance and understanding of holistic health and illness.

Present Study

In the U.S., the use of CAM therapies has increased dramatically over the past several years (Eisenberg et al., 1998). Much of the attention in the literature results from surveys of CAM usage in the general population and from patients with specific medical conditions. Though the evidence is not entirely consistent, researchers indicate that the heaviest users are White, educated, and from an upper socioeconomic class (Eisenberg et al., 1993, 1998). In addition, such individuals tend to be in poor health, have chronic pain, and have very specific illnesses that have not been adequately addressed by conventional medicine. What are not known are CAM usage patterns in underrepresented groups such as Asian Americans. One study of Chinese immigrants (Ma, 1999) confirmed that the use of Western medicine is circumscribed by cost, lack of

insurance and cultural experiences and attitudes. It demonstrates that although self-treatment and the use of traditional Chinese physicians is high so is the integration of both CAM and Western medicine. Another study of Korean seniors found 42% were using traditional healers for chronic conditions (Pourat, N., Lubben, J., Wallace, S.P., & Moon, A., 1999). Though these studies reflect some research concerning Asian Americans, there is not enough information to determine what their patterns of CAM usage are, if questions from studies of White Americans apply, or exactly what health beliefs drive the use of CAM. What may be true for White, educated, upper socioeconomic groups of individuals, may not be true of Asian Americans. In fact, what may be considered "alternative medicine" to many White Americans maybe considered "conventional medicine" to many Asians. There may be cultural differences as to why they use it. For example, self care includes a wide variety of responses to symptoms of illness such as resting, taking over-the-counter medicine, as well as CAM therapies; all of which are done in the U.S. and Japan. However, the reasoning behind self care use in Japan is historically, culturally, and socially different than the U.S. The Japanese culture has its own distinct rules and expectations for behavior and emotional expression; any deviant behavior is severely criticized. These rules influence the beliefs about health and illness, in expressing psychological distress, how one goes about the healing process, and whom one goes to for help. To understand how these cultural values and health beliefs influence a Japanese Americans' decision to use CAM, it is important to understand their cultural views on health.

In light of current research, the present study will address the following hypotheses:

1) Asian cultural values (emotional self-control, humility, filial piety, conformity to norms) will positively correlate with Asian health beliefs (disease conviction, psychological versus somatic focusing, affect inhibition, denial, and irritability) and with CAM usage for physical symptoms while Asian cultural values and Asian health beliefs will negatively correlate with CAM usage for psychological symptoms.

2) Asian health beliefs will positively mediate the relationship between Asian cultural values and CAM usage for psychological, somatic, and physical symptoms (Figure 1).

A: The differences in usage for the effects of age, acculturation, and education will be explored in order to determine whether similar CAM demographic profiles exist in Japanese-Americans as in the literature for White Americans.

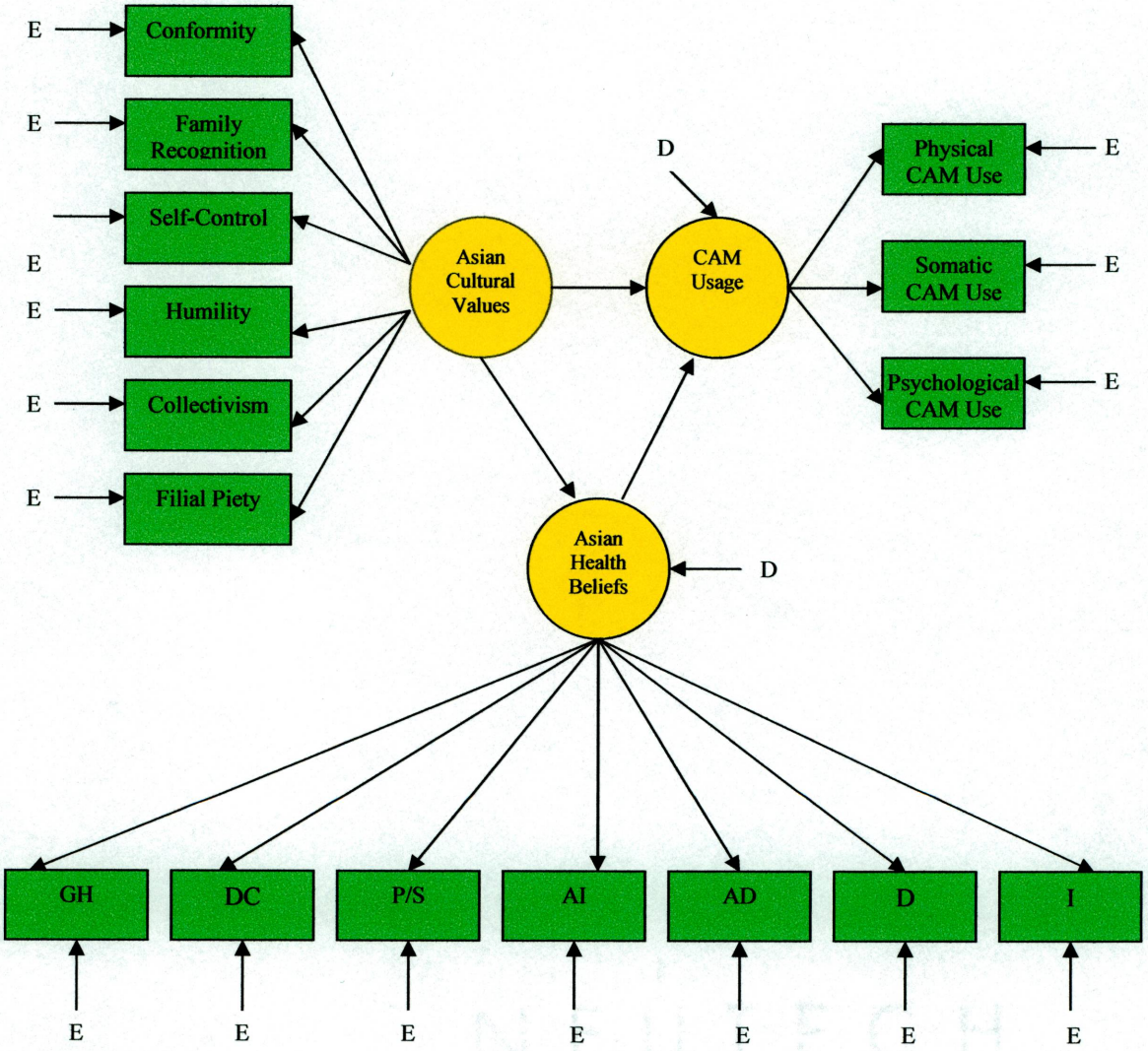


Figure 1. Asian Cultural Values Prediction of CAM Use Mediated by Asian Health Beliefs

Methods

Participants

Sixty-nine subjects were recruited from a database of a clinical research center in Honolulu, Hawaii. The database contained subjects between the ages of 25-80 who presented no major health problems. These subjects were first recruited to participate in a study that was being done at the clinical research center from February to August 2000. The subjects had to be of Japanese descent, in good physical health, and presenting no major health problems to participate. These subjects were also asked if they would like to participate in future studies held at the clinical research center. Those subjects that had agreed to participate in future studies were recruited to participate in the present study.

Measures

Demographics. Subjects completed a demographic questionnaire regarding: age, gender, years of education, country of origin, when they immigrated from Japan to the U.S., ethnicity, predominant language spoken, Japanese generation, and religious affiliation.

Asian Values. As mentioned earlier, Asian cultural values dictate how an individual may respond to health problems. The more one adheres to these cultural values, the more likely their response to health problems will be culturally appropriate. For example, an individual who adheres more to Asian cultural values will be more likely to respond to health and emotional problems in a way that is appropriate for that culture (e.g., resolving problems by themselves, using various forms of CAM, or displaying symptoms somatically). Conversely, if an individual adheres less to Asian cultural values

and more to a Western values system, they may be more likely to respond to problems that are deemed appropriate for that culture (e.g., relying more on professional help than on self treatment). In order to assess an individual's adherence to Asian cultural values, the Asian Values Scale-AVS (Kim, Atkinson & Yang, 1999) will be administered. The AVS is a 36-item instrument that assesses adherence to Asian cultural values endorsed by Asian Americans. The Asian cultural value scale is comprised of six subscales: Conformity to Norms, Family Recognition through Achievement, Emotional Self-Control, Collectivism, Humility, and Filial Piety. Items of the AVS are statements that reflect a specific Asian value, such as "One should not deviate from familial and social norms." The instrument has an equal number of statements reflecting positive and negative feelings (e.g., Educational failure does not bring shame to the family"). A scaled score based on average ratings of completed items for the 36 items is used to assess adherence to Asian cultural values. The overall item mean score for the AVS ranges from 1 to 7, with 1 indicating least adherence to Asian values and 7 indicating greatest adherence to Asian values. The internal consistency for the AVS ranged from a coefficient alpha .81 to .82 and a two-week coefficient stability of .83. The coefficient alphas for the subscales are as follows: Conformity to Norms = .69, Family Recognition Through Achievement = .62, Emotional Self-Control = .47, Collectivism = .54, Humility = .57, and Filial Piety = .38. The AVS provides good evidence for concurrent and discriminate validity with results yielding a Goodness-of-Fit Index = .973, Comparative Fit Index = .972, and Bentler—Bonett Normed Fit Index = .961.

Illness behavior. The Illness Behavior Questionnaire (IBQ) is a 62-item self-administered questionnaire that yields scores reflecting various aspects of illness behavior

and affective states (Pilowsky, 1967; Pilowsky & Spence, 1976, 1994). This questionnaire is used to rate seven dimensions of illness behavior: General Hypochondriasis (GH) – fear of illness with some insight as to its excessiveness; Disease Conviction (DC) – firm belief that a somatic disorder is present and a reluctance to accept a doctor's reassurance; Psychological versus Somatic Focusing (P/S) – high scores indicating the patient feels somehow responsible for the illness and is in need of psychiatric help and low scores indicating a rejection of such ideas and a tendency toward somatization; Affect Inhibition (AI) – difficulty in expressing personal feelings, especially negative feelings; Affect Disturbance (AD) – feelings of anxiety, depression and tension; Denial (D) – tendency to deny life stresses and to attribute all current difficulties to somatic disorders; Irritability (I) – a measure of interpersonal friction. The dimensions General Hypochondriasis, Disease Conviction, Psychological versus Somatic Functioning, Affect Inhibition, Affect Disturbance, Denial, and Irritability will be used to represent Asian Health Beliefs for they demonstrate how cultural values may influence an Asian person to react when dealing with illness that is culturally inappropriate. Estimates of test-retest reliability for the five scales are as follows: Disease conviction = 0.76; Psychological versus somatic concern = 0.76; Affective inhibition = 0.67; Denial = 0.86; Irritability = 0.84. The IBQ has also demonstrated predictive, concurrent, and criterion validity.

CAM rates. In order to determine how individuals decide to deal with different types of symptoms, subjects were given three vignettes, each describing a person experiencing either a psychological, psychosomatic, or a physical symptom. Types of symptoms included anxiety, stomachache, and high cholesterol. For each vignette, the

subjects were asked to mark the recommendations they would use for dealing with these symptoms. The choices for handling each symptom have been adapted from Crock, Jarjoura, Polen, and Rutecki's (1999) list of alternative therapies. The recommendations were subdivided into 6 groups: 1) Asian—acupuncture, acupressure, shiatsu, yoga, 2) Body—massage, weight-loss programs, exercise, 3) Food—herbs/kampo, vitamins, folk remedies, traditional whole foods, 4) Manipulation—chiropractic, osteopathic, 5) Psychosocial/spiritual—relaxation, prayer, spiritual healing, biofeedback, self-help groups, 6) Western medicine—psychologist, psychiatrist, or general medical practitioner for diagnosis and/or medications.

Procedures

Sixty-nine male and female Japanese American subjects were used for this study. They were recruited from a database of a clinical research center in Honolulu, Hawaii. For anonymity to be maintained, the names and addresses of each subject were typed on address labels and affixed to envelopes that were used to mail the questionnaires and any other information about the study by Karen Garcia, the office manager of the clinical research center and not affiliated with the present study. A letter from the clinical research center was initially sent to all subjects that have indicated an interest in participating in further research. The letter briefly described how the patient was recruited, a description of the study, as well as information about the researcher involved with the present study. A postcard was included with the letter allowing the subjects to indicate whether or not they would like to participate. Subjects who indicated an interest in participating was sent a packet that contained the informed consent, the study questionnaires, and a letter to the subject that explained a little about the experimenter,

how they were chosen to participate in the study, a statement of gratitude for participating, the option to obtain a summary of the research findings, and a description of the possible benefit if they choose to participate. Eight subjects were randomly chosen to be rewarded with $10 gift certificates from local eateries for their participation. These recipients were randomly chosen by Karen Garcia. The informed consent was obtained by asking the subjects to include it when they mail back their completed questionnaires. The subjects were asked to fill out the questionnaires and send them back in the included self-addressed stamped envelope, within in a three week time period. Three weeks after the questionnaires were sent, a reminder thank you postcard was sent out to all subjects

Results

Data Screening

Two hundred male and female Japanese Americans were contacted for participation. One hundred and twenty-one subjects (60.5%) agreed to participate by sending back a postcard indicating their wishes regarding participation; five declined to participate. Seventy-seven of the 116 who had agreed to participate returned their questionnaires via mail for a response rate of 63.6%. During analyses, 8 subjects were omitted from the data set due to missing data on 5 or more items, for a final total of 69 subjects (59.5% response rate).

Descriptive statistics were computed for all demographic, independent and dependent variables. The data were screened for normality to verify that statistical assumptions for analyses were met (Table 1 & 2). Skewness and kurtosis for all variables of interest were within an acceptable range (below +/- 1.00).

Table 1
Descriptive Statistics of Demographic Variables

	Age	Years of Education	Generation
Mean	51.1	15.3	3.2
Median	52	16	4
Mode	47	17	4
Std. Deviation	13.4	2.0	1.3
Skewness	-.22	-1.3	-.65
Kurtosis	-.27	1.4	-.86
Minimum	20	8	1
Maximum	81	17	5

Table 2
Descriptive Statistics for Asian Values Scale, Illness Behavior Questionnaire, CAM Use

	M	SD	Range
AVS	149.2	24.3	56-213
IBQ	52.9	5.3	45 - 71
Psychological CAM	15.8	1.8	14 - 23
Somatic CAM	14.7	1.1	14 – 20
Physical CAM	16.3	1.5	14 - 20

Characteristics of Subjects

Demographic information was collected in order to describe the sample of participants. Demographic characteristics may be seen in Table 3. Table 4 contains demographic characteristics on CAM usage for psychological, somatic, and physical symptoms.

Reliability and Factor Analyses

The following section presents the reliability analyses for the Asian Values Scale (AVS) and the Illness Behavior Questionnaire (IBQ). For each of these measures, the reliability coefficients for each of the subscales was computed and examined for the sample. The Cronbach's alpha for the AVS subscales were: .47 (Collectivism), .62 (Conformity to Norms), .13 (Emotional Self-Control), .54 (Family Recognition Through Achievement), .24 (Filial Piety), .59 (Humility). The Cronbach's alpha for the IBQ subscales were: .65 (General Fear of Illness), .39 (Disease Conviction), .06 (Psychological versus Somatic perception), .60 (Affective Inhibition), .78 (Affective Disturbance), .66 (Denial), and .62 (Irritability). The results for both measures demonstrate low to moderate reliability; this was deemed unacceptable for the present study. Typically, total scores for both of these scales can be used. The Cronbach's alpha

Table 3
Demographic characteristics of Japanese-American Sample

DESCRIPTIVES	Frequency (*n*)	% of Sample	Mean	SD
GENDER				
Males	41	59.4		
Females	28	40.6		
AGE (20-49 yrs)	69	100.0	51.1	2.0
COUNTRY OF ORIGIN				
United States	47	69.1		
Japan	20	20		
Other	1	1.5		
LANGUAGE				
English	56	81.2		
Japanese	13	18.8		
GENERATION			3.2	1.3
1st	15	22.1		
1.5	2	2.9		
2nd	15	22.1		
3rd	30	44.1		
4th or later	6	8.8		
EDUCATION			15.3	2.0
8th grade or less	1	1.5		
High School	8	11.8		
College/Vocational School	36	53		
Graduate School	23	33.8		
INCOME				
< 10k	8	11.6		
10-20k	10	14.5		
20-30k	8	11.6		
30-40k	12	17.4		
40-50k	12	17.4		
> 50k	19	27.5		
RELIGION				
Buddhist	15	23.2		
Catholic	11	1.4		
Protestant/Christian	18	26.1		
None	25	36.2		
Other	9	13		
HEALTH STATUS				
Excellent	21	30.4		
Good	31	44.9		
Average	14	20.3		
Fair	2	2.9		
Poor	1	1.4		

Table 4

Demographic characteristics of CAM usage for psychological, somatic, physical symptoms

DESCRIPTIVES	Frequency (*n*)	% of Sample
PSYCHOLOGICAL SYMPTOMS		
Acupuncture	3	4.3
Massage	13	18.8
Chinese herbs/Kampo	2	2.9
Prayer	23	33.3
Biofeedback	0	0
Shiatsu	8	11.6
Exercise	29	42
Chiropractor	1	1.4
Self-help	13	18.8
Traditional Cultural Remedies	1	1.4
Yoga	10	14.5
Dieting/Weight Loss	2	2.9
Vitamins	5	7.2
Food/Lifestyle diet	12	17.4
Western Medicine	57	82.6
SOMATIC SYMPTOMS		
Acupuncture	1	1.4
Massage	1	1.4
Chinese herbs/Kampo	2	2.9
Prayer	10	14.5
Biofeedback	0	0
Shiatsu	2	2.9
Exercise	5	7.2
Chiropractor	0	0
Self-help	4	5.8
Traditional Cultural Remedies	2	2.9
Yoga	1	1.4
Dieting/Weight Loss	1	26.1
Vitamins	1	91.3
Food/Lifestyle diet	18	0
Western Medicine	63	91.3

Table 4 (continued)

DESCRIPTIVES	Frequency (*n*)	% of Sample
PHYSICAL SYMPTOMS		
Acupuncture	0	0
Massage	0	0
Chinese herbs/Kampo	4	5.8
Prayer	5	7.2
Biofeedback	0	0
Shiatsu	1	1.4
Exercise	47	68.1
Chiropractor	0	0
Self-help	9	13
Traditional Cultural	1	1.4
Remedies		
Yoga	2	2.9
Dieting/Weight Loss	31	44.9
Vitamins	4	5.8
Food/Lifestyle diet	52	75.4
Western Medicine	43	62.3

for the AVS and the IBQ were .53 and .83 respectively; however, the focus of the present study was at the subscale level for these two measures and did not use total scores.

Thus, factor analyses were performed to determine a consistent factor pattern for this sample on the AVS and the IBQ (Table 5 & 6). Factor analysis with principal axis factoring extraction was performed on 36 items of the AVS. Several criteria were used to determine the number of factors to retain: scree test plot, eigenvalues greater than 1.00, and the variance. These criteria suggested a two-factor solution.

A two-factor solution was selected using the principal axis factoring extraction with a direct oblimin rotation. In order to establish meaningful factors the following two criteria were used to identify which factors were to be retained: a) items with a factor loading of .30 or above, and b) factors that have a minimum of 3 items loading above .30. With these criteria, 17 items across 2 factors were extracted from the AVS that accounted for 31% of the total variance. Factor 1, Family Reputation and Conformity, measures

one's concern about disgracing family name and conforming to family expectations. It consisted of 11 items and accounted for 18.3% of the variance (alpha = .81). Factor 2, Collectivism, measures one's connectedness and integrity to a group for the sake of group harmony. It consisted of 6 items and accounted for 12.7% of the variance (alpha = .75). The alpha coefficient for the total scale was .76, which is evidence of good internal consistency. These two factors will be employed to test the hypotheses of the present study. Table 7 shows the means and standard deviations for this revised measure.

The same procedure was used on the 62 items of the IBQ. The results yielded 17 items, corresponding to 3 factors, which accounted for 40.2% of the total variance. Factor 1, *Fear of Illness*, measures a marked concern about one's health status. It consisted of 9 items and accounted for 22.7% of the variance (alpha = .82). Factor 2, *Irritability*, measures the presence of anxiety and hostility. It consisted of 4 items and accounted for 9.9% of the variance (alpha = .76). Factor 3, *Distress about physical health*, measures distress about one's physical health. It consisted of 4 items and accounted for 7.5% of the variance (alpha = .61). A total scale score from the 17 items that remained from the initial 62 demonstrated an alpha coefficient of .80. Table 7 shows the means and standard deviations this revised measure.

Table 5
Factor Loadings for Factor Analysis: Asian Values Scale

Factors	Items	Loading
Factor 1: **Family Reputation and Conformity** • Measures one's concern about disgracing family name and conforming to family expectations.	#1. Educational failure does not bring shame to the family	.63
	#27. Family's reputation is not the primary social concern.	.63
	#4. One need not focus all energies on one's studies	.55
	#10. One need not achieve academically in order to make one's parents proud	.55
	#28. One need not be able to resolve psychological problems on one's own.	.55
	#7. Younger persons should be able to confront their elders.	.43
	#31. Occupational failure does not bring shame to the family.	.40
	#11. One need not minimize or depreciate one's own achievements.	.38
	#22. Parental love should be implicitly understood and not openly expressed	.35
	#20. One need not conform to one's family's and the society's expectation	.34
	#32. One need not follow the role expectations of one's family.	.27
Factor 2: **Collectivism** • Measures one's connectedness and integrity to a group for the sake of group harmony.	#16. Modesty is an important quality for a person.	-.83
	#30. One should not inconvenience others	-.75
	#26. One should be humble and modest	-.69
	#17. One's achievements should be viewed as the family's achievements.	-.56
	#14. One should think about one's group before oneself	-.54
	#12. One should consider the needs of others before considering one's own needs	-.52

Table 6

Factor Loadings for Factor Analysis: Illness Behavior Questionnaire

Factors	Items	Loadings
Factor 1: **Fear of Illness** • Measures a marked concern about one's health status.	#34. Do you often worry about the possibility that you have gotten a disease?	.82
	#1. Do you worry a lot about your health?	.70
	#21. Are you afraid of illness?	.64
	#38. If a disease is brought to your attention do you worry about getting it yourself?	.64
	#47. Do you find that you get sad easily?	.62
	#37. Do you often think that you might suddenly fall ill?	.53
	#2. Do you think there is something seriously wrong with your body?	.45
	#6. Do you think you are more liable to illness than other people?	.43
	#11. Do you ever think that you have an illness which is a punishment for something you have done wrong in the past?	.29
Factor 2: **Irritability** • Definition: Measures the presence of anxiety and angry feelings.	#56. Are you more irritable towards other people?	.71
	#48. Do you worry or fuss over small details that seem unimportant to others?	.68
	#61. Do you often find that you lose patience with other people?	.67
	#59. Is it hard for you to relax?	.54
Factor 3: **Distress about physical health** • Definition: Measures distress about one's physical health.	#33. Is it hard for you to believe a doctor when he tells you there is nothing for you to worry about?	.79
	#30. Do you ever have silly thoughts about your health, which you can't get out of your mind; no matter how hard you try?	.49
	#15. Does it upset you to talk to a doctor about illness?	.45
	#42. Do you frequently try to explain to others how you are feeling?	.44

Table 7
Descriptive Statistics for Factor Analyzed Asian Values Scale and Illness Behavior Questionnaire

	M	SD	Range
AVS Total	66.9	12.4	22-99
Family Reputation & Conformity	35.8	9.9	11-62
Collectivism	31.2	6.0	11-42
IBQ Total	20.1	3.1	17-29
Fear of Illness	10.7	2.2	9-17
Irritability	5.0	1.3	4-8
Distress about physical health	4.4	8.3	4-8

Correlations

Tables 8 through 11 indicate the correlations between the demographic, Asian values, Asian health values, and CAM variables. Table 8 provides the correlations between the demographic variables. Education was positively correlated with generation level and income, but was negatively correlated with age. Income was positively correlated with generation level and health status. These correlational patterns are consistent with the research hypotheses.

Table 9 shows the correlations among the independent and dependent measurements. Fear of Illness was positively correlated with Irritability. Psychological CAM use was positively correlated with Somatic CAM use and Physical CAM use. Somatic CAM use was positively correlated with Physical CAM use. Collectivism was negatively correlated with Somatic CAM and Physical CAM use. All correlations except the final one are consistent with the research hypotheses.

Table 8
Correlation Matrix of Demographic Variables

	1	2	3	4	5	6
1. Age	1.00					
2. Education	**-.34****	1.00				
3. Generation	-.22	**.37****	1.00			
4. Income	.05	**.32****	**.48****	1.00		
5. Health Status	.03	.12	.23	**.26***	1.00	
6. Religion	-.004	.02	.17	.04	-.09	1.00

* $p < .05$
* *$p < .01$

Table 9
Correlation Matrix of Asian Cultural Values, Asian Health Beliefs, and CAM Use

	1	2	3	4	5	6	7	8	9
1. Family Reputation & Conformity	1.0								
2. Collectivism	.17	1.0							
3. Fear of Illness	.19	.18	1.00						
4. Irritability	.04	.05	**.28***	1.00					
5. Distress about physical health	.08	-.06	.13	.22	1.00				
6. Psychological CAM	.04	-.16	.15	.09	.02	1.00			
7. Somatic CAM	-.09	**-.25***	.01	.12	-.06	**.67****	1.00		
8. Physical CAM	-.18	**-.38***	-.08	-.09	-.15	**.53****	**.38****	1.00	
9. Western Medicine	-.14	-.16	-.17	-.17	-.23	-.19	-.13	-.02	1.00

* $p < .05$
** $p < .01$

Table 10 shows the correlations between demographic variables and CAM variables. Education was positively correlated with Physical CAM use, which is consistent with the research hypotheses.

Table 10
Correlation Matrix of Demographics and CAM Variables

	Psychological CAM	Somatic CAM	Physical CAM	Western Medicine
1. Age	-.21	-.13	-.23	-.03
2. Education	.01	.04	**.28***	.09
3. Generation	-.01	.05	.21	**.29***
4. Income	-.16	-.06	.06	.02
5. Health	.10	.15	.10	-.04
6. Religion	.01	-.11	.12	-.10

* $p < .05$

Table 11 shows the correlations between demographic variables, Asian Cultural Values, and Asian Health Beliefs. Fear of Illness was negatively correlated with education, generation, income, and health. Distress About Physical Health is negatively correlated with generation. These findings are consistent with the research hypotheses.

Table 11
Correlation Matrix of Demographics and Asian Cultural Values and Asian Health Beliefs

	Family Reputation & Conformity	Collectivism	Fear of Illness	Irritability	Distress About Physical Health
1. Age	.20	.22	-.02	-.04	.20
2. Education	-.18	-.14	**-.42****	-.24	-.19
3. Generation	-.14	-.13	**-.37****	.02	**-.28***
4. Income	-.07	.05	**-.27***	-.10	-.06
5. Health	-.01	.00	**-.32****	-.09	.04
6. Religion	-.18	-.15	.02	.10	.07

* $p < .05$
** $p < .01$

Model Estimation

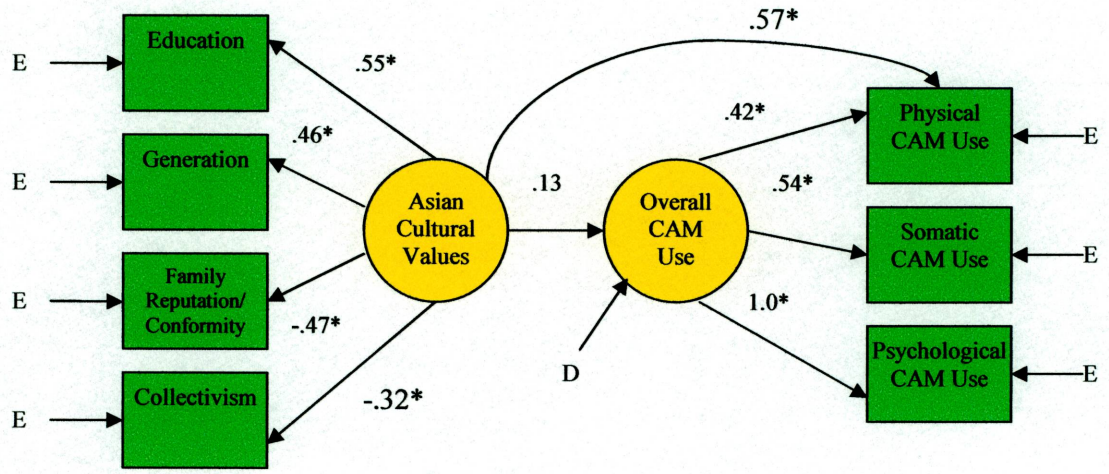
Structural equation modeling (SEM) was used to test the full model. The final model is shown in Figure 1. Each observed variable is shown in a square and factors or latent variables are represented by circles. A line represents a hypothesized direct relationship between two variables, and the variable with the arrow pointing to it is the dependent variable. In this model, there are three latent variables and ten observed variables. Error terms ("disturbances" for latent variables) are included in the SEM diagram, represented by "E's" for measured variables and "D's" for latent variables. The error terms represent residual variances within variables not accounted for by pathways hypothesized in the model. One-way arrows represent structural regression coefficients and thus indicate the impact of one variable on another. For example, the four unidirectional arrows leading from the factor Asian Cultural Values to each of four observed variables suggest that scores on the latter are "caused" by Asian Cultural Values. Similarly, the unidirectional arrow from Asian Cultural Values pointing towards Asian Health Beliefs implies that the former causes the latter. The one-way arrows pointing from the Es and Ds indicate the impact of random measurement error on the observed variables and error in the prediction of factors.

The analysis was conducted by means of the EQS computer program with robust estimation procedures for maximum likelihood based on EQS v. 6.0 (Bentler & Wu, 2001). The following indicators were used for the statistical evaluation of the full model: (1) chi-square test, as a measure of model fit, determines the degree to which the structural equation model fits the sample data; (2) Akaike Information Criterion (AIC) (Akaike, 1987; Bozdogan, 1987) as a measure parsimony in the model (small values indicate a good-fitting, parsimonious model; however, there is no clear answer because

this indice is not normed to a 0 -1 scale); (3) comparative fit index (CFI) (Bentler, 1988) as a measure of comparison between the proposed model and a null model (values greater than .90 should be observed in good model fitting); and (4) root mean square error of approximation (RMSEA) (Browne & Cudeck, 1993; Hu & Bentler, 1999) as a measure of the error of approximation of the model indicating the quality of its specification (the RMSEA should be lower than .10).

Model modification is sometimes necessary for the SEM model. Modifying a model is done to improve the fit and to test hypotheses. The three basic methods of model modification are chi-square difference test, Lagrange multiplier test (LM) and Wald test. For these particular SEM models, the LM test was used. The LM test asks what parameters should be added to the model to improve the fit of the model.

To test for mediation, an initial test of the hypothesized CAM model was done between Asian Cultural Values and CAM Use (Figure 2). Modifications were performed in an attempt to develop a better fitting, more parsimonious model. On the basis of the Lagrange multiplier test and theoretical relevance, one path was added. As seen in Table 12, the model fit the data well: X^2 (21, $\underline{N}$ = 69) = 87.87, $\underline{p}$ < .05, AIC = -.13.31, CFI = 1.0, RMSEA = .00. In examining the pathways (Figure 2), Education and Level of Generation were predicted by Asian Cultural values in the opposite direction of Family Reputation and Collectivism. Asian Cultural Values were predicted by Physical CAM Use. Physical, Somatic, and Psychological CAM Use were predicted by Overall CAM Use.



* $p < .05$

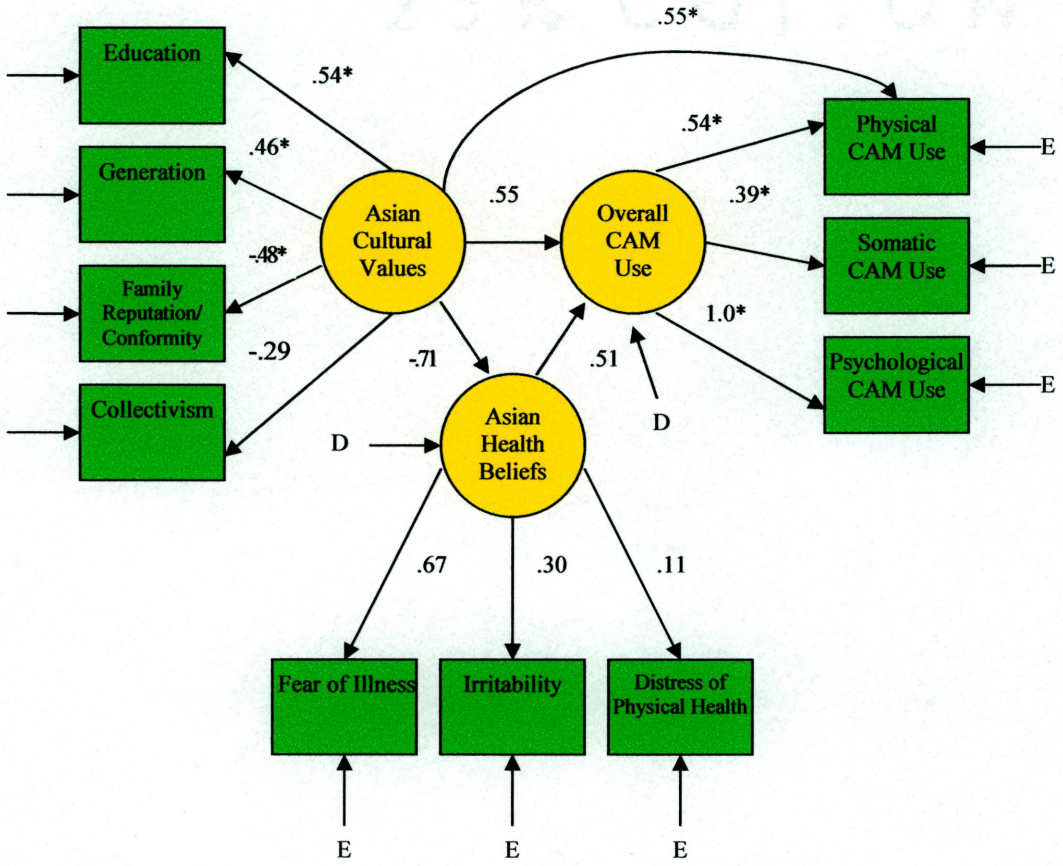
Figure 2. Asian Cultural Values Predicts Overall CAM Use

Table 12

Asian Cultural Values Predicts CAM Use

Model	Scale X^2	DF	AIC	CFI	RMSEA
Model 1 Hypothesized Model					
Model 2 Path added-physical CAM use predicted by Asian Cultural Values	87.87	21	-13.31	1.0	.00

Figure 3 shows the final hypothesized full CAM model. As seen in Table 13, the final model fit the data: X^2 (45, N = 69) = 123.84, $p < .05$, AIC = -44.49, CFI = 1.00, RMSEA = .00; however, Asian Health Beliefs only partially mediated Asian Cultural Values and Overall CAM Use and demonstrated suppression effects. In examining the pathways (Figure 3), Education and Generation Level were predicted by Asian Cultural Values in the opposite direction of Family Reputation. Asian Cultural Values were predicted by Physical CAM Use and Physical, Somatic, and Psychological CAM Use were predicted by Overall CAM Use.



* p < .05

Figure 3. Asian Cultural Values Prediction of Overall CAM Use Mediated by Asian Health Beliefs

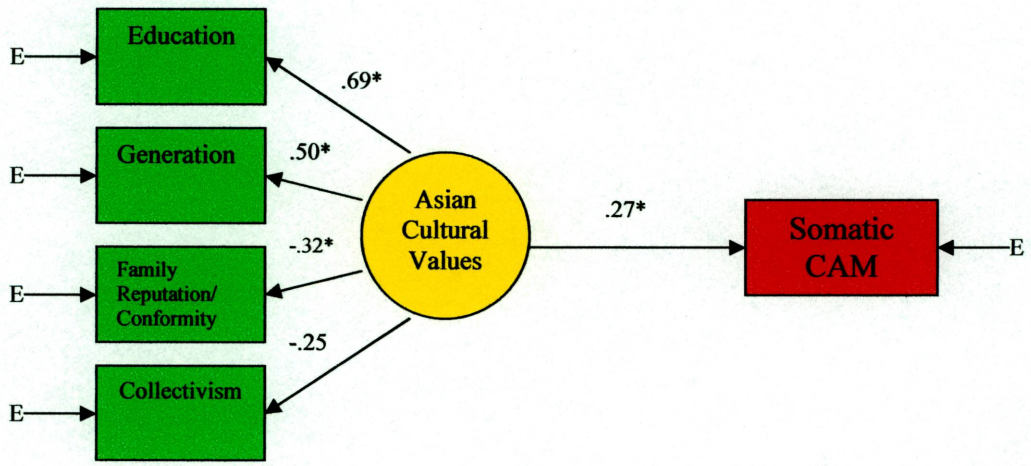
Table 13
Summary of Structural Equation Model of Asian Cultural Values Prediction of CAM Use Mediated by Asian Health Beliefs

Model	Scaled X^2	DF	AIC	CFI	RMSEA
Model 1 Hypothesized Model	123.84	45	-44.49	1.00	.00

Due to the findings from the full CAM model, subsequent models of each specific CAM use (i.e. psychological, somatic, and physical) were done to determine

possible differences by symptom and if Asian Health Beliefs mediated Asian Cultural Values and CAM Use.

Figure 4 shows a significant relationship between Asian Cultural Values and Somatic CAM Use. As can be seen in Table 14, this model fit the data well: X^2 (4, N = 69) = 2.04, $p < .05$, AIC = -5.96, CFI = 1.00, RMSEA = .00. In Figure 4, the pathways revealed that Education and Generation Level predicted Asian Cultural Values in the opposite direction of Family Reputation and Conformity. Asian Cultural Values also predicted Somatic CAM Use.



* $p < .05$

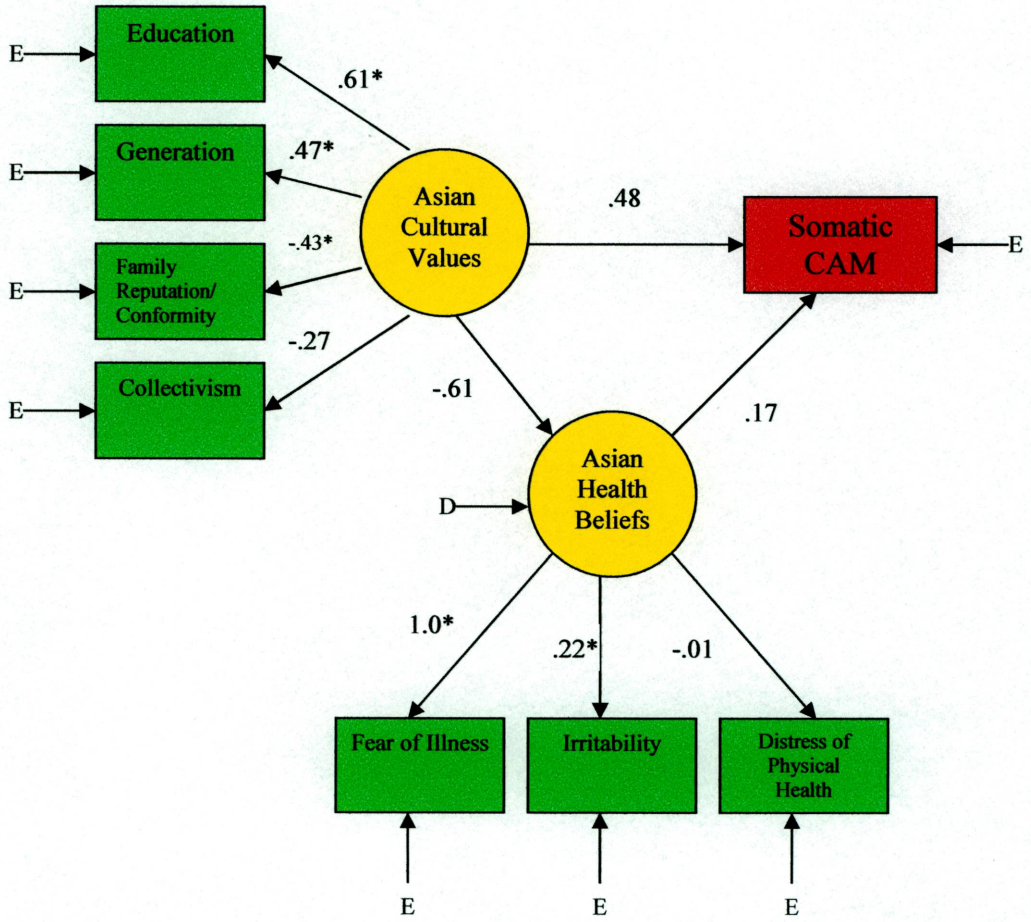
Figure 4. Asian Cultural Values Predicts Somatic CAM Use

Table 14
Asian Cultural Values Predicts Somatic CAM Use

Model	Scale X^2	DF	AIC	CFI	RMSEA
Model 1 Hypothesized Model	2.04	4	-5.96	1.00	.00

Figure 5 shows the full hypothesized model with Asian Health Beliefs mediating Asian Cultural Values and Somatic CAM Use. As seen in Table 15, the model fit the

data well: X^2 (8, N = 69) = 9.43, p < .05, AIC = -6.57, CFI = .93, RMSEA = .05; however, Asian Health Beliefs only partially mediated Asian Cultural Values and Somatic CAM Use and demonstrated suppression effects. The pathways in Figure 5 revealed that Education and Generation Level predicted Asian Cultural Values in the opposite direction of Family Reputation and Conformity. Irritability predicted Asian Health Beliefs.



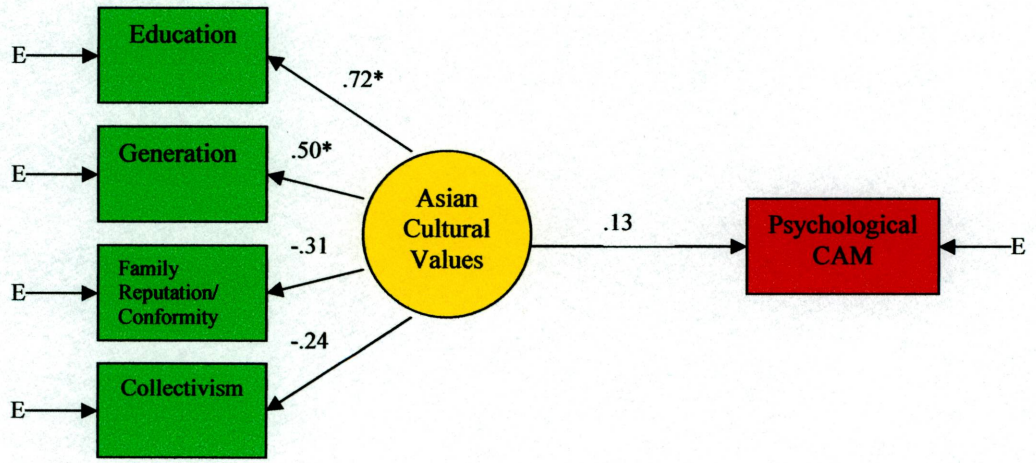
* p < .05

Figure 5. Asian Cultural Values Prediction of Somatic CAM Use Mediated by Asian Health Beliefs

Table 15
Summary of Structural Equation Model of Asian Cultural Values Prediction of Somatic CAM Use Mediated by Asian Health Beliefs

Model	Scale X^2	DF	AIC	CFI	RMSEA
Model 1 Hypothesized Model	4.22	17	-29.78	1.00	.00

Figure 6 shows the relationship between Asian Cultural Values and Psychological CAM Use. As seen in Table 16, the model fit the data well: X^2 (10, N = 69) = 19.72, p < .05, AIC = -6.62, CFI = 1.00, RMSEA = .00. The pathways in Figure 6 show that Education and Generation Level predicted Asian Cultural Values.



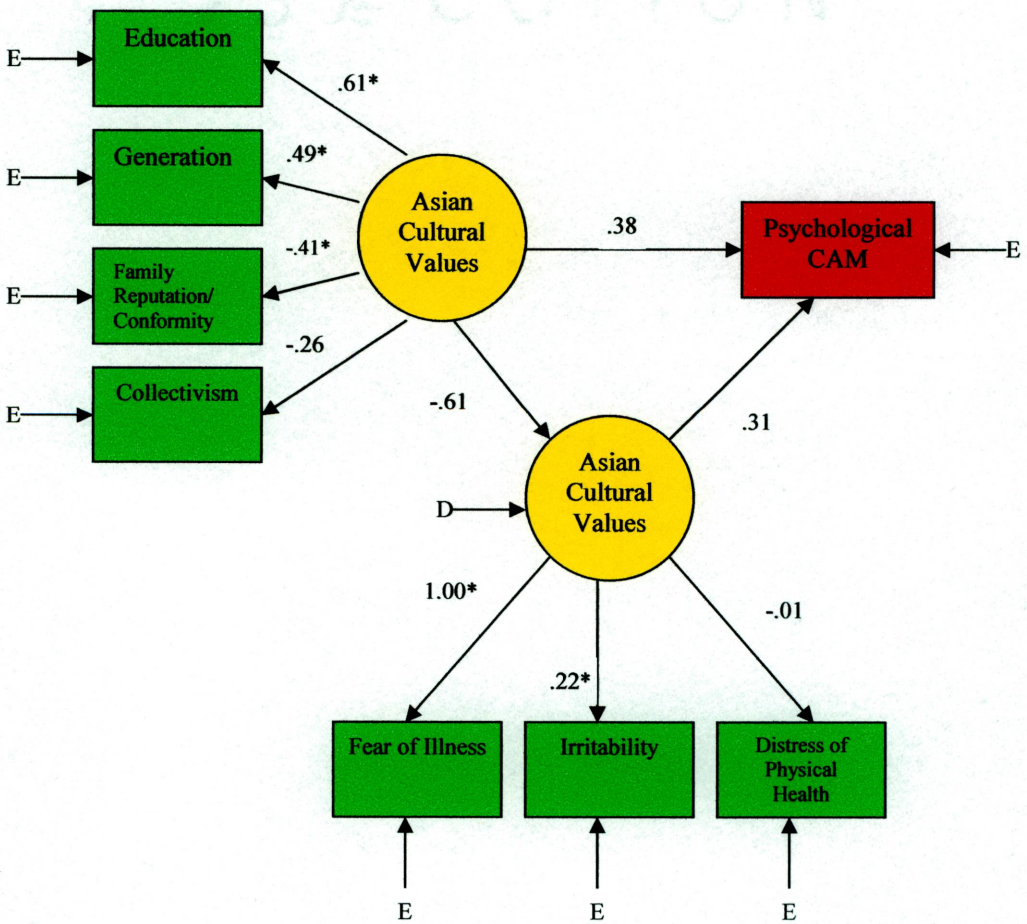
* p < .05

Figure 6. Asian Cultural Values Predicts Psychological CAM Use

Table 16
Asian Cultural Values Predicts Psychological CAM Use

Model	Scale X^2	DF	AIC	CFI	RMSEA
Model 1 Hypothesized Model	19.72	10	-6.62	1.00	.00

Figure 7 shows the fully hypothesized model with Asian Health Beliefs mediating Asian Cultural Values and Psychological CAM Use. As seen in Table 17, the model fit the data well: X^2 (17, N = 69) = 11.32, p < .05, AIC = -22.66, CFI = 1.00, RMSEA = .00; however, Asian Health Beliefs only partially mediated Asian Cultural Values and Psychological CAM Use and demonstrated suppression effects. The pathways show that Education and Generation Level predicted Asian Cultural Values in the opposite direction of Family Reputation and Conformity. Fear of Illness and Irritability also predicted Asian Health Beliefs.



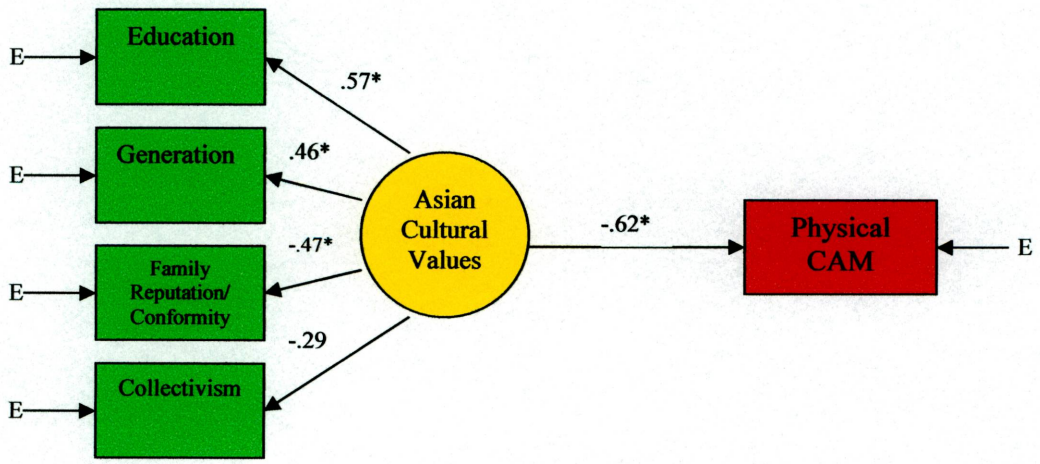
* p < .05

Figure 7. Asian Cultural Values Prediction of Psychological CAM Use Mediated by Asian Health Beliefs

Table 17
Summary of Structural Equation Model of Asian Cultural Values Prediction of Psychological CAM Use Mediated by Asian Health Beliefs

Model	Scale X^2	DF	AIC	CFI	RMSEA
Model 1 Hypothesized Model	11.32	17	-22.66	1.00	.00

Figure 8 shows the relationship between Asian Cultural Values and Physical CAM use. As seen in Table 18, the model fit the data well: X^2 (14, $\underline{N}$ = 69) = 2.24, $\underline{p}$ < .05, AIC = -5.76, CFI = 1.00, RMSEA = .00. The pathways in Figure 8 show that Education and Generation Level predicted Asian Cultural Values in the opposite direction of Family Reputation and Conformity. Asian Cultural Values predicted Physical CAM Use indicating an inverse relationship.



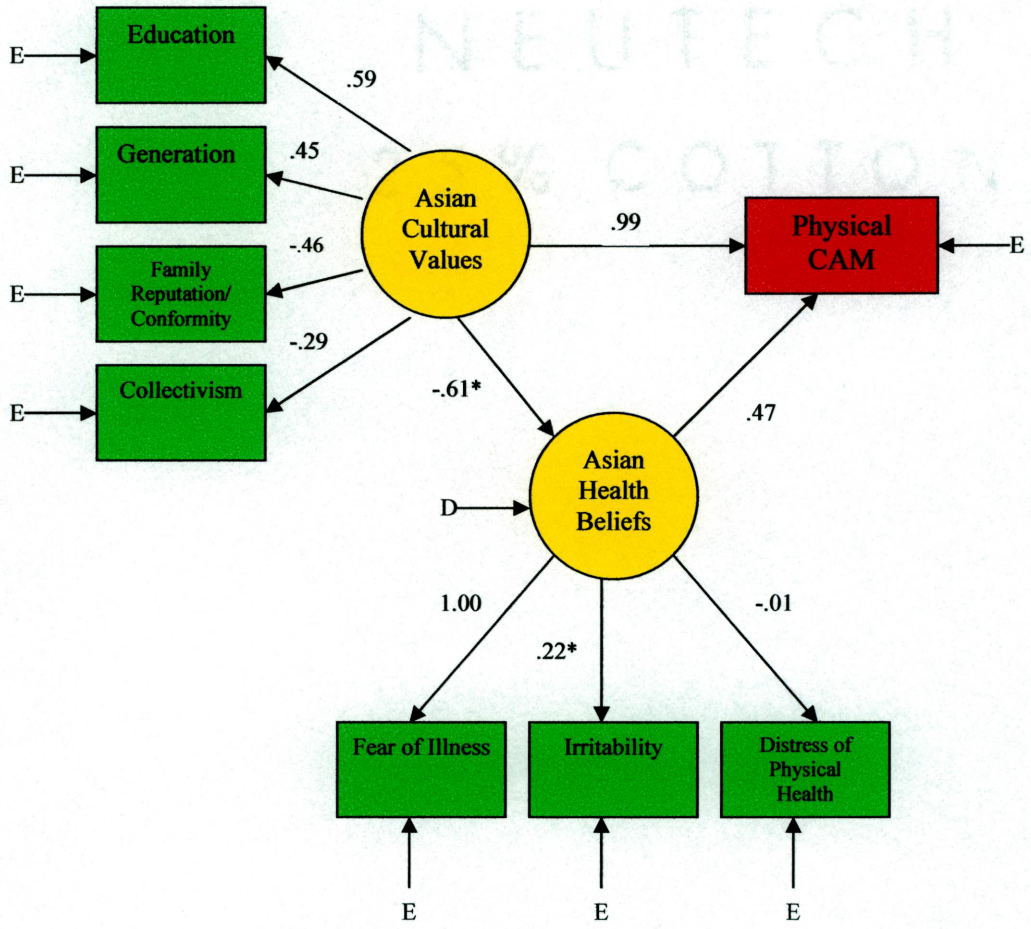
* $\underline{p}$ < .05

Figure 8. Asian Cultural Values Predicts Physical CAM Use

Table 18
Asian Cultural Values Predicts Physical CAM Use

Model	Scale X^2	DF	AIC	CFI	RMSEA
Model 1 Hypothesized Model	2.24	4	-5.76	1.00	.00

Figure 9 shows the fully hypothesized model with Asian Health Beliefs mediating Asian Cultural Values and Physical CAM use. As seen in Table 19, the model fit the data well: X^2 (17, $\underline{N}$ = 69) = 11.30, $\underline{p}$ < .05, AIC = -22.70, CFI = 1.00, RMSEA = .00; however, Asian Health Beliefs only partially mediated Asian Cultural Values and Physical CAM use because the value-CAM pathway was enhanced rather than reduced by the addition of health beliefs; in addition the direction of the relationship changed from negative to positive. The pathways show that Fear of Illness and Irritability predicted Asian Health Beliefs. Asian Cultural Values were negatively related to Asian Health Beliefs; Asian Health Beliefs were positively related to Physical CAM use.



* $p < .05$

Figure 9. Asian Cultural Values Prediction of Physical CAM Use Mediated by Asian Health Beliefs

Table 19
Summary of Structural Equation Model of Asian Cultural Values Prediction of Physical CAM Use Mediated by Asian Health Beliefs

Model	Scale X^2	DF	AIC	CFI	RMSEA
Model 1 Hypothesized Model	11.30	17	-22.70	1.00	.00

Discussion

The present study investigated the relationships between Asian cultural values, Asian health beliefs, and CAM usage in Japanese Americans. An examination of the correlational patterns among demographic variables, generation, age, income, education, and health status reveal all were predictors of CAM use in Japanese Americans. Findings from previous studies corroborate some but not all of the demographic findings in the present study. Previous studies have found that the heaviest users of CAM tended to be educated, healthy, young-old and had higher incomes (Astin, 1998, Eisenberg et al., 1993, 1998, Najm, Reinsch, Hoehler, & Tobis, 2003). In the present sample the participants were older and generally healthy – we also found that the more educated and higher income participants used CAM. However, our results showed that only when the individuals became distressed about their health, they used CAM. Whether this is a general finding or one specific to Japanese Americans will be explored further. In addition, we examined generation which has not been studied in CAM use research previously. Other researchers have only assessed ethnicity group differences or specific ethnic groups as a whole while ignoring possible influences of underlying cultural values or health beliefs. By examining different generational groups within the Japanese-American population, this study can make conclusions about any differences in CAM usage for specific belief systems regarding different types of symptoms.

Further examination of the correlation patterns between demographic variables Asian cultural values, Asian health beliefs, and CAM usage revealed that Japanese-Americans who had more years of education used CAM for physical symptoms. This is

consistent with recent literature that has found that having a high school education or above was one the predictors of CAM use (Tindle, Davis, Phillips, & Eisenberg, 2005; Mackenzie, Taylor, Bloom, Hufford, & Johnson, 2003). However, in the present sample, first and second generation Japanese-Americans had more distress over physical health as indicated by a negative relationship between illness beliefs and generation. Eastern health beliefs dictate extreme vigilance over one's physical health that requires constant monitoring of health to maintain proper harmony and balance in life. It is possible that first and second generation Japanese-Americans, who are likely less acculturated, continue to observe those traditional cultural beliefs; however, further research is needed in this area to fully understand the health beliefs of this cultural group. The measure of Asian health beliefs used in this study lacked construct validity and resulted in only a general distress score that is difficult to interpret.

The primary finding of this study relates to the association between a marked concern about one's health with less acculturation, education, income and poor perceived health. This finding is consistent with previous studies that have shown CAM users consider themselves to be in poor health and have been unable to obtain satisfactory care from traditional medical care providers (Bausell et al., 2001, McMahan & Lutz, 2004; Morton, Testerman, Mason, & Ronan, 2003) or that they are chronically ill (i.e. Seidman, & Synderman, 2001; Jacob et al., 2001; Lee, Line, Wrensch, Adler, & Eisenberg, 2000). We speculate that the participants with less education, income and generational status are less acculturated and may have more traditional, culturally based health beliefs concerning the harmony between mind and body that is sought through alternative medicines and practices. These same individuals may also simply have less access to

health care in general and therefore turn to alternative means to alleviate symptoms and decrease their worry over health. An exploratory correlational analysis of the rate of Western medicine use in response to the three vignettes with the demographic variables revealed a positive correlation between Western medicine use and generational status ($r = .29$, $p < .01$). This correlation supports the idea that the less acculturated either have no faith in Western medicine or no access to Western medicine and therefore turn to alternative medicines and practices.

The CAM use measure was created specifically for the present investigation and demonstrates a great deal of promise for cross cultural health investigations. Specifically, the Crock et al. (1999) measure of CAM types was revised somewhat to include other specifically Japanese CAM types (e.g., kampo and shiatsu) and was used as a list of possible alternative medicines that one would use if experiencing three types of health situations: somatic, psychological and physical symptomatology. The correlational patterns across these three types of symptoms were similar, indicating convergent validity for the scale. In addition, the use of CAM for each of these types of symptoms was uncorrelated with the use of Western medicine indicating that this is not simply assessing individuals who use every possible type of health remedy available at all times. The measure requires further psychometric evaluation and possibly additional vignettes to increase its reliability and validity.

In examining mediator effects, it was hypothesized that Asian health beliefs would mediate the relationship between Asian cultural values and CAM usage. This hypothesis was partially supported. The full CAM model (Figure 3) demonstrated that collectivism is necessary but not sufficient for CAM use. What is also required is a

certain amount of distress and therefore vigilance about one's health that was indicated by the factor analyzed subscales of the Asian Health Beliefs measure (hypochondriasis, irritability, and emotional inhibition). This suggests that Japanese-Americans who adhere to Asian cultural values will use CAM when they are feeling a significant amount of distress about their health. In the additional models, we see that when they begin to worry about the state of their physical health in particular, they are more likely to use CAM. CAM may actually decrease their distress about possible illness across all illness categories. Additionally, the full CAM model indicates that the Asian cultural values relationship to CAM use for physical symptoms is partially mediated by Asian health beliefs. This finding is somewhat unexpected; one would think that Japanese-Americans would use CAM more for psychological or somatic symptoms because of the stigma regarding mental health problems in this culture. However, the partial mediation pattern of health beliefs is stronger with cultural values and CAM use for physical symptoms than other types of symptoms.

The further analyses of the three types of symptoms that could result in CAM use were conducted because of the different patterns demonstrated in the full model. These analyses revealed that Asian Health Beliefs do partially mediate Asian Cultural Values and each of the three specific CAM use scores such that health beliefs acted as suppressor variable. For Japanese-Americans who were collectivistic and distressed/vigilant about their health, CAM was used for psychological, somatic and especially physical symptoms. In fact, for physical symptoms, Asian values demonstrated a negative path to CAM use before the mediator of Asian health beliefs was entered in the model. The mediator significantly increased the strength of the path between cultural values and CAM use for

physical symptoms and changed the direction of the relationship from -.62 to .99 indicating an almost perfect prediction – if you are a 1st or 2nd generation Japanese American living in Hawaii, you will use CAM for symptoms of physical illness.

All of these results are consistent with the basic fundamentals of Asian medicine and the use of self-care strategies. Asian medicine encourages self-reliance and personal autonomy in maintaining a healthy and well-balanced life; this requires active involvement, constant monitoring, and therefore vigilance about one's health and well-being. CAM use is therefore explained by the Japanese sensitivity to the condition of the body, the management of its care (Caudill, 1976) and the selectivity regarding the use of professional and/or self care in response to any specific symptoms or perceived symptoms. It is when there is a perceived personal threat to their health, more specifically physical health, that there is more reliance on CAM. This is congruent with the literature on self-care, which has shown that Japanese people who perceive their health as a threat and constantly monitored it rely more on self-care (Haug et al., 1990).

In addition to this, it seems that Japanese people are more culturally inclined to pursue relief of physical symptoms when there is a perceived threat; physical symptoms have always been more culturally acceptable to admit and discuss. It is considered socially and culturally acceptable for all physical illness to be expressed openly, while psychiatric ones are hidden (Ohnuki-Teirney, 1984; Rogers & Izutsu, 1980). This may explain why CAM was used much more for physical symptoms rather than psychological or somatic symptoms in the present sample population. Psychological symptoms generally carry a great deal of stigma for they suggest poor mental health which may lead to being ostracized by society. In order to treat psychological symptoms, Asian people

will somaticize them or report them as physical symptoms so that it is more culturally acceptable to seek help, whether traditional or professional. For example, a Japanese-American person who is experiencing high levels of stress or anxiety is not going to automatically think that these symptoms indicate a psychological problem and they will therefore not be likely to seek psychological services, no matter how acculturated they are. What may happen is that feelings of stress or anxiety are still primarily perceived/reported as a physical symptom such as a tension headache, stiff neck, or stomachache. Furthermore, if these physical symptoms cause enough distress, CAM and/or professional help will be sought. For example, if a Japanese-American person is experiencing severe chest pains due to high levels of stress and anxiety, they may not necessarily think that stress is the cause of their problem; they would assume they are having heart problems which require any number of CAM therapies. Convincing them of a panic attack would be very difficult. This may explain why Western medicine was significantly sought more for psychological and somatic symptoms.

What is also important to notice is that Japanese-Americans are not solely using CAM for all three symptoms. Over 50% of the sample would seek Western medicine in addition to CAM for all three symptoms. Consistent with the current research literature Asians are more likely to seek professional help when they feel their symptoms have become serious, especially when they are also vigilant about health and well-being as a cultural value. As Haug et al. (1990) has demonstrated, using CAM simultaneously while seeking professional help is indicative of a focus on good health that is central to Japanese culture. Eastern health beliefs dictate that Japanese people be vigilant of their personal health and continue to use various forms of self treatment even though they are

seeing a physician. The continual use of CAM reflects the underlying belief that health is based on maintaining harmony and balance throughout a person's life and not only for periods of illness. This may explain why individuals continue self care while simultaneously seeing a physician, though many physicians may be unaware of this simultaneous CAM usage.

External and Construct Validity

The findings of the present study may not generalize to other Japanese-Americans in the U.S. Hawaii is a state that has a large Asian community, in particular, a large and tight-knit Japanese community. The influences of Japanese culture are everywhere, which allows a Japanese-American person to easily maintain ties to the culture which may influence many of their health decisions. This is much different than Japanese-American communities elsewhere in the U.S.; although they may be large, there is a sense that Western American culture has more of an influence in the mainland. Future studies should include Japanese-Americans from other states to see if there are any similarities in CAM usage to those in the cultural enclave of Hawaii.

All operational definitions of the study constructs appear to be adequate; however, there is concern about the psychometric properties of both the Asian Values Scale (AVS) and the Asian Health Beliefs Scale (IBQ). The factor analyses for both AVS and IBQ showed that the constructs need further development and may not include as many factors as the original authors proposed (Kim et al., 1999, Pilowsky, 1969). The AVS was used to assess an individual's adherence to Asian cultural values and therefore, the more one adheres to these cultural values, the more likely their response to health problems will be culturally appropriate; however, the subscales, which demonstrated

basic core Asian cultural values, were not originally psychometrically sound. Although the subscales formulated are good examples of what Asian cultural values are, the low reliabilities in the original study (Kim et al., 1990) may indicate fewer factors and the need for refinements of the items. In future studies, other measurements that focus on Asian values should be included in addition to or instead of the AVS. These may include assessments of constructs such as collectivism, mental health beliefs, or emotional control.

The IBQ, which was used to assess Asian health beliefs, assessed various aspects of illness behavior and affective states. Originally, it was used to demonstrate how cultural values may influence an Asian person to react when dealing with illness that is culturally inappropriate; however, as stated earlier, the factor pattern produced subscales that seem to reflect a distress and vigilance about health. The reason for this may be that the scale itself does not contain items that culturally pertain to Asian culture or health beliefs. The items of the IBQ look specifically at illness behavior, which clearly do impact decision making regarding CAM use. However, ideally, an Asian health beliefs measure should include factors that address cultural values that impact behavior when dealing with an illness that is deemed culturally inappropriate. Unfortunately, there are no current measures that assess Asian health beliefs in this way. The IBQ was chosen because its factors were thought to be the closest to what Asian health beliefs represented. Until an appropriate measure is developed, subsequent studies may want to generate specific questions that tap into cultural aspect of health beliefs.

Given the strong path coefficients and the fit of the CAM models tested here, it appears that cultural values and health beliefs do strongly impact self care behaviors

regarding symptoms of health and well-being. Health beliefs clearly demonstrated partial mediation of the value and CAM relationship demonstrating compelling evidence that future research should focus on health care decision making within cultural groups. Future directions may include the comparison of different Japanese-American generational groups and other Asian-American groups to determine how vigilance about health interacts with values to influence CAM use. Further research may be able to unpackage how well such values and beliefs determine specific choices regarding CAM along with other types of Western medicine.

Study Limitations

There were several limitations that may have affected the validity of the study results. First, the small sample size reduced the power of the study significantly such that few variables could be included in the causal models. A larger sample may allow more specific analyses regarding the impact of certain beliefs and specific CAM choices. For example, certain health beliefs may encourage the use of herbal remedies for all types of symptoms rather than any specific differentiation by symptom. Second, the majority of the sample population was from an older cohort so the findings may reveal only information about a certain cohort of Japanese-Americans. Younger Japanese Americans who are likely to have fewer health concerns and much older Japanese Americans who are likely to have more health concerns may not show the same patterns regarding distress and vigilance about health. Third, the majority of the sample included Japanese-Americans from later generations (3rd or higher). Though many cultural values are maintained until the 3rd generation, and cultural values are more likely to be maintained in Japanese Americans in Hawaii, future research should include more subjects that are

either 1st or 2nd generation who may adhere more to traditional cultural values, which in turn may have a different affect on health beliefs and CAM usage.

Future considerations

The results of this study demonstrate significant and compelling relationships between the variables of interest. Values and Beliefs about health clearly impact health behaviors and these relationships have not been previously examined in the existing research literature. Much of the attention in the literature has focused on CAM usage in the general population and from patients with specific medical conditions. The heaviest users have been White, educated, and from upper socioeconomic classes (Eisenberg et al., 1993, 1998). In addition, users also tend to be in poor health, have chronic pain, and have very specific illnesses that have not been adequately addressed by conventional medicine. Studies that did focus on Asian culture and CAM usage have not determined what the patterns of CAM usage are in Asian cultures and what health beliefs and cultural values drive the use of CAM. The simple correlational design of this study does not allow us to assume cause and effect, though it seems logical that values and beliefs may affect behaviors. If a physician knows that a Japanese American patient is likely to be very vigilant and interested in maintaining their health and preventing disease, these belief systems can be employed to motivate patient compliance and patient honesty regarding self care practices that may or may not complement other Western forms of care. In light of these findings, future research should consider focusing on specific generational or Asian groups to more fully understand the how health beliefs are impacting health care choices and whether the medical community needs to understand further how to approach medical care for such patients.

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APPENDIX A

COVER LETTER

Dear Research Participant,

Several years ago, you participated in a research study done by the Hawaii Clinical Research Center. During one of the interviews, you indicated that you would be interested in participating in future research. Because of your interest in research, you are invited to participate in the current study.

The current research study focuses on Japanese American cultural and health values and health behaviors. The questions on this survey pertain to cultural values, health beliefs, and health behaviors. This survey is part of a supervised thesis project that is being conducted by Theodora Stratis, M.A. under the supervision of Kelly R. Morton, Ph.D. at Loma Linda University. Theodora is a resident of Honolulu and is currently pursuing her Ph.D. in Clinical Psychology at Loma Linda University, in Southern California. Her research interests are Japanese culture and Health. Since she is half-Japanese herself, she takes great interest and pride in learning more about her culture.

If you choose to participate in this study, please fill out the enclosed postcard and mail it back. Once your postcard is received, a study questionnaire will be mailed to you. It should take approximately 30-40 minutes to complete. Everything you answer on the questionnaire will be completely anonymous; there will be no identifying information on the survey. Additionally, you are under no obligation to participate. If at any point while filling out the questionnaire you decided you are no longer willing to participate, you may stop wherever you are and fill out no more. If there are particular questions you want to skip, you may do so. Completion of this survey will expose you to minimal risk, no more than daily life.

When you have completed the questionnaire, insert it in the self-addressed, stamped envelope that will be provided, and mail it back. You will also be eligible to receive a gift certificate to either Zippy's Restaurant or Tower Records if you choose to enter the drawing by returning a postcard separately from your survey.

I hope all of you will decide to participate in this important and worthwhile study. I believe this study has the potential to help me and other health professionals learn more about Japanese culture and how to better treat and serve Japanese Americans. If you have any questions please contact either me, Denis Mee-Lee, M.D., at (808) XXX-XXXX or Theodora Stratis, M.A., (909) 558-8165 or at tstratis@hotmail.com.

Thank you in advance for your time and cooperation.

Sincerely,

Denis Mee-Lee, M.D.
Hawaii Clinical Research Center

APPENDIX B

INFORMED CONSENT

Asian American Health Beliefs and Behaviors Survey

Dear Participant,

Recently, you received a letter from Dr. Denis Mee-Lee from the Hawaii Clinical Research Center and agreed to complete a survey for our study on Asian-American health beliefs and behaviors. This survey is part of a supervised thesis project that is being conducted by Theodora Stratis, M.A., at Loma Linda University. The questions on this survey pertain to your values, health beliefs, and health behaviors. Everything you answer here is completely anonymous; our mailing list will be destroyed after survey recruitment has been completed and no identifying information will be included on the individual surveys that you return to us. You are under no obligation to participate. If at any point while filling out the questionnaire you decide you are no longer willing to participate, you may stop wherever you are and fill out no more. If there are particular questions you want to skip, you may do so. Completion of this survey will expose you to minimal risk, no more than a typical day when you think about your health or health care.

Please take 30 to 40 minutes right now to complete the survey, insert it in the self-addressed, stamped envelope that we have provided, and mail it to us. By returning the survey to us, you will be consenting to have your responses included in the project.

By returning the survey, you have an opportunity to be placed in a drawing for prizes (a gift certificate from Zippy's restaurant or Tower Records). At the completion of the study, 8 participants will be randomly chosen to receive a gift certificate of their choice if you choose to return a postcard with your name and address for the drawing.

If while completing this survey, you have any questions about this project, please do not hesitate to contact me or my research supervisor, Kelly R. Morton, Ph.D., at (909) 558-8165 or email me at tstratis@hotmail.com. If you wish to talk to an impartial third party not associated with this research regarding a complaint or concern, you may call any Patient Representative at Loma Linda University Medical Center (909) 558-4647.

Thank you for your time and cooperation.

Sincerely,

Theodora Stratis, M.A.
Doctoral Student
Clinical Psychology

Kelly R. Morton, Ph.D.
Associate Professor
Family Medicine
Psychology

APPENDIX C

PARTICIPATION POSTCARD

Thank you for taking the time to read the included letter from Dr. Denis Mee-Lee of the Hawaii Clinical Research Center, regarding the study on Japanese-American health beliefs and behaviors. If you choose to participate in this study, please indicate so by circling one of two responses below. Remember, you are under no obligation to participate. However, if you choose to participate, please mail this postcard back, upon which you will receive a packet which will include a consent form, study questionnaire, and another postcard that will enable you to enter a raffle on completion of the study questionnaire.

- Yes, I would like to participate
- No, I would not like to participate

Thank you in advance for your time and cooperation!

Theodora Stratis, M.A.
Graduate Student in Psychology

Kelly R. Morton, Ph.D.
Associate Professor

APPENDIX D

RAFFLE ENTRY POSTCARD

Thank you for participating in this research project. For your participation, you many enter a raffle for a chance to win one of eight $10.00 Gift Certificates for Zippy's Restaurants. To enter, just fill in an email address or telephone number where we may contact you if you are one of the raffle winners. Take a couple of seconds now and send in for your chance to win!!!

Where may we contact you if you are a raffle winner?

_____

Thank you!

Theodora Stratis, M.A.
Psychology Graduate Student

Kelly R. Morton, Ph.D.
Associate Professor

p.s. remember to return the raffle entry postcard and the survey materials **separately**, and do not write your name on either the raffle entry postcard or the survey materials.

APPENDIX E

SURVEYS

Demographics

Age: _____ Gender: M F

Years of Education: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17+

Religion Affiliation:

Buddhist Catholic
Protestant Baptist
Other _____

Ethnicity: _____

Language Predominantly Spoken: _____

Country of Origin: _____

Please choose one that best describes you:

__ 1st Generation: Born and raised in another country

How long have you been in the U.S.? _____

__ 1.5 Generation: Born outside of the U.S. and raised mostly in the U.S.

How old were you when you came to the U.S.? _____

__ 2nd Generation: Born and raised in the U.S.

__ 3rd Generation: You and your parents were born and raised in the U.S.

__ 4th Generation or later

Asian Values Scale

Instructions: Use the scale below to indicate the extent to which you agree with the value expressed in each statement.

1 = Strongly Disagree
2 = Moderately Disagree
3 = Mildly Disagree
4 = Neither Agree nor Disagree
5 = Mildly Agree
6 = Moderately Agree
7 = Strongly Agree

_____1. Educational failure does not bring shame to the family.

_____2. One should not deviate from familial and social norms.

_____3. Children should not place their parents in retirement homes.

_____4. One need not focus all energies on one's studies.

_____5. One should be discouraged from talking about one's accomplishments.

_____6. One should not be boastful.

_____7. Younger persons should be able to confront their elders.

_____8. When one receives a gift, one should reciprocate with a gift of equal or greater value.

_____9. One need not follow one's family's and the society's norms.

_____10. One need not achieve academically in order to make one's parents proud.

_____11. One need not minimize or depreciate one's own achievements.

_____12. One should consider the needs of others before considering one's own needs.

_____13. Educational and career achievements need not be one's top priority.

_____14. One should think about one's group before oneself.

_____15. One should be able to question a person in an authority position.

_____16. Modesty is an important quality for a person.

_____17. One's achievements should be viewed as family's achievements.

_____18. Elders may not have more wisdom than younger persons.

_____19. One should avoid bringing displeasure to one's ancestors.

_____20. One need not conform to one's family's and the society's expectations.

_____21. One should have sufficient inner resources to resolve emotional problems.

_____22. Parental love should be implicitly understood and not openly expressed.

_____23. The worst thing one can do is to bring disgrace to one's family reputation.

_____24. One need not remain reserved and tranquil.

_____25. The ability to control one's emotions is a sign of strength.

_____26. One should be humble and modest.

_____27. Family's reputation is not the primary social concern.

_____28. One need not be able to resolve psychological problems on one's own.

_____29. Following familial and social expectations are important.

_____30. One should not inconvenience others.

_____31. Occupational failure does not bring shame to the family.

_____32. One need not follow the role expectations (gender, family hierarchy) of one's family.

_____33. One should not make waves.

_____34. Children need not take care of their parents when the parents become unable to take care of themselves.

_____35. One need not control one's expression of emotions.

_____36. One's family need not be the main source of trust and dependence.

Illness Behavior Questionnaire

Instructions: On the following pages you will find a number of questions about your health and how it affects you. For the purposes of our survey, it is important that you complete **every** question, even though some of them may not be directly applicable to you.

Here are some questions about you and your health. Circle either **YES** or **NO** to indicate your answer to each questions.

1.	Do you worry a lot about your health?	YES	NO
2.	Do you think there is something seriously wrong with your body?	YES	NO
3.	Do you have an illness which interferes with your life a great deal?	YES	NO
4.	Are you easy to get on with when you are ill?	YES	NO
5.	Does your family have a history of illness?	YES	NO
6.	Do you think you are more liable to illness than other people?	YES	NO
7.	If a doctor told you that he could find nothing wrong with you, would you believe him?	YES	NO
8.	Is it easy for you to forget about yourself and think about all sorts of other things?	YES	NO
9.	If you feel ill and some tells you that you are looking better, do you become annoyed?	YES	NO
10.	Do you find that you are often aware of various things happening in your body?	YES	NO
11.	Do you ever think that you have an illness which is a punishment for something you have done wrong in the past?	YES	NO
12.	Do you have trouble with your nerves?	YES	NO
13.	If you fell ill or worried can you be easily cheered up by the doctor?	YES	NO
14.	Do you think that other people realize what it's like to be sick?	YES	NO
15.	Does it upset you to talk to a doctor about illness?	YES	NO
16.	Are you bothered by many aches or pains?	YES	NO
17.	Do you have an illness which affects the way you get on with your family or friends a great deal?	YES	NO
18.	Do you find that you get anxious easily?	YES	NO
19.	Do you have an illness which is the same as anybody you know has had?	YES	NO
20.	Are you more sensitive to pain than other people?	YES	NO
21.	Are you afraid of illness?	YES	NO
22.	Can you express your personal feelings easily to other people?	YES	NO
23.	Do people feel sorry for you when you are ill?	YES	NO
24.	Do you think that you worry about your health more than most people?	YES	NO
25.	Do you have an illness which affects your sexual relations?	YES	NO
26.	Do you have an illness with a lot of pain?	YES	NO
27.	Except for illness, do you have any problems in your life?	YES	NO
28.	Do you care whether or not people realize when you are ill?	YES	NO

29.	Do you find that you get jealous of other people's good health?	YES	NO
30.	Do you ever have silly thoughts about your health which you can't get out of your mind, no matter how hard you try?	YES	NO
31.	Do you have any financial problems?	YES	NO
32.	Are you upset by the way people take your illness when you are sick?	YES	NO
33.	Is it hard for you to believe a doctor when he tells you there is nothing for you to worry about?	YES	NO
34.	Do you often worry about the possibility that you have got a serious disease?	YES	NO
35.	Are you sleeping well?	YES	NO
36.	When you are angry, do you tend to bottle up your feelings?	YES	NO
37.	Do you often think that you might suddenly fall ill?	YES	NO
38.	If a disease is brought to your attention (through the radio, television, newspapers or someone you know) do you worry about getting it yourself?	YES	NO
39.	Do you get the feeling that people are taking your illness seriously enough when you are sick?	YES	NO
40.	Are you upset by the appearance of your face or body?	YES	NO
41.	Do you find that you are bothered by many different symptoms?	YES	NO
42.	Do you frequently try to explain to others how you are feeling?	YES	NO
43.	Do you have any family problems?	YES	NO
44.	Do you think there is something the matter with your mind?	YES	NO
45.	Are you eating well?	YES	NO
46.	Is bad health the biggest difficulty of your life?	YES	NO
47.	Do you find that you get sad easily?	YES	NO
48.	Do you worry or fuss over small details that seem unimportant to others?	YES	NO
49.	Are you always a co-operative patient?	YES	NO
50.	Do you often have symptoms of a serious disease?	YES	NO
51.	Do you find that you get angry easily?	YES	NO
52.	Do you have any work problems?	YES	NO
53.	Do you prefer to keep your feelings to yourself?	YES	NO
54.	Do you often find that you get depressed?	YES	NO
55.	Would all your worries be over if you were physically healthy?	YES	NO
56.	Are you more irritable towards other people?	YES	NO
57.	Do you have symptoms which may be caused by worry?	YES	NO
58.	Is it easy for you to let people know when you are mad with them?	YES	NO
59.	Is it hard for you to relax?	YES	NO
60.	Do you have personal worries which are not caused by physical illness?	YES	NO
61.	Do you often find that you lose patience with other people?	YES	NO
62.	Is it hard for you to show people your personal feelings?	YES	NO

CAM Usage

THE FOLLOWING SITUATIONS DESCRIBE SOMEONE WHO IS HAVING A PERSONAL DIFFICULTY. FOR EACH SITUATION, PLEASE INDICATE HOW YOU WOULD RECOMMEND THAT PERSON HANDLE THE DIFFICULTY.

1. Someone you know is feeling deep personal distress and anxiety. This person has been anxious, irritable, and "on edge" for several months.

What would suggest this person do? Check all that you would recommend to address the problem:

___ Acupuncture	___ Shiatsu	___ Yoga
___ Massage	___ Exercise	___ Dieting/weight loss
___ Chinese Herbs/Kampo	___ Chiropractor	___ Vitamins
___ Prayer	___ Self-help	___ Food/Lifestyle Diet
___ Biofeedback	___ Traditional Cultural Remedies	

___ Seek Professional Help for Diagnosis and Medication (e.g., physician, psychologist, psychiatrist)

2. Someone you know is suffering from constant stomachaches for no apparent reason. This person has been experiencing constipation, diarrhea, and has been unable to eat as they usually do for several weeks. This behavior is not like his/her normal way of behaving.

What would suggest this person do? Check all that you would recommend to address the problem:

___ Acupuncture	___ Shiatsu	___ Yoga
___ Massage	___ Exercise	___ Dieting/weight loss
___ Chinese Herbs/Kampo	___ Chiropractor	___ Vitamins
___ Prayer	___ Self-help	___ Food/Lifestyle Diet
___ Biofeedback	___ Traditional Cultural Remedies	

___ Seek Professional Help for Diagnosis and Medication (e.g., physician, psychologist, psychiatrist)

3. Someone you know has high cholesterol. He/she is over-weight, eats a lot high fatty foods, and is not very physically active.

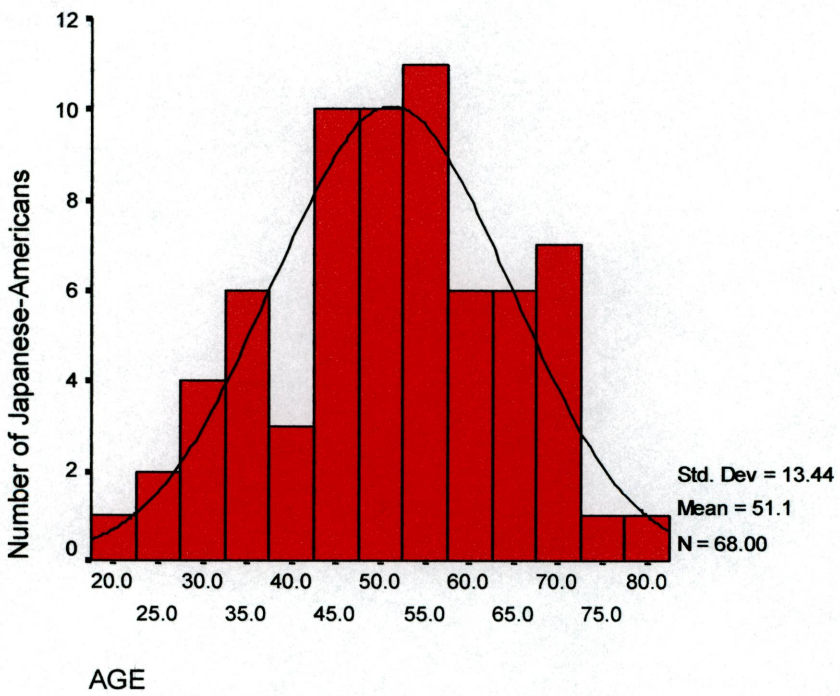
What would suggest this person do? Check all that you would recommend to address the problem:

___ Acupuncture	___ Shiatsu	___ Yoga
___ Massage	___ Exercise	___ Dieting/weight loss
___ Chinese Herbs/Kampo	___ Chiropractor	___ Vitamins
___ Prayer	___ Self-help	___ Food/Lifestyle Diet
___ Biofeedback	___ Traditional Cultural Remedies	

___ Seek Professional Help for Diagnosis and Medication (e.g., physician, psychologist, psychiatrist)

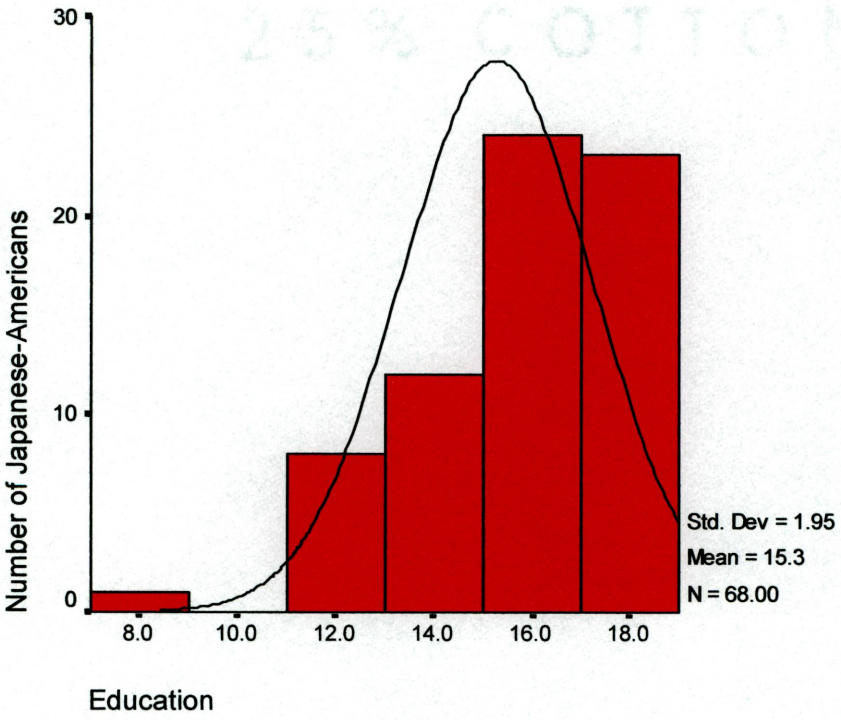
APPENDIX F

DISTRIBUTION OF AGE



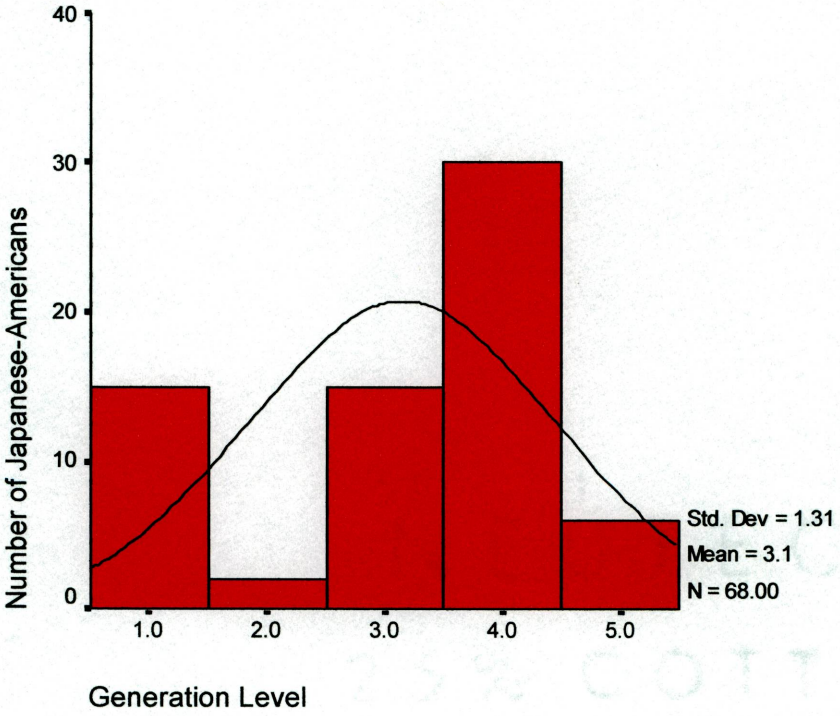
APPENDIX G

DISTRIBUTION OF EDUCATION



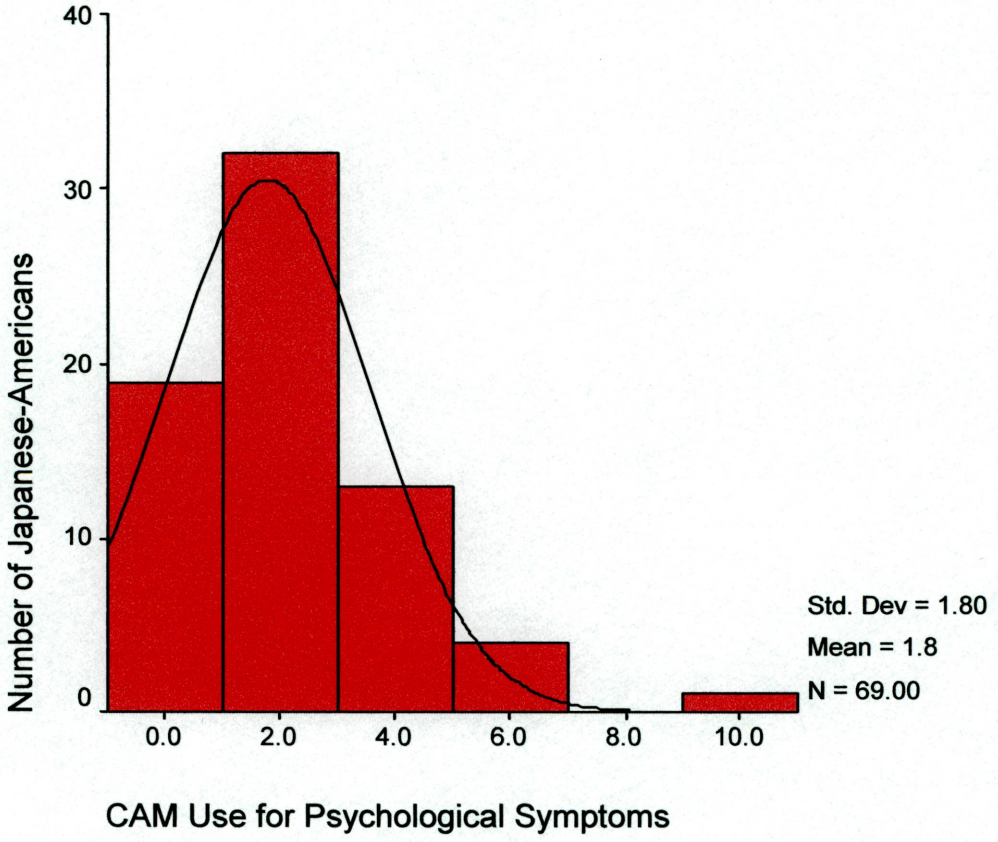
APPENDIX H

DISTRIBUTION OF GENERATION LEVEL



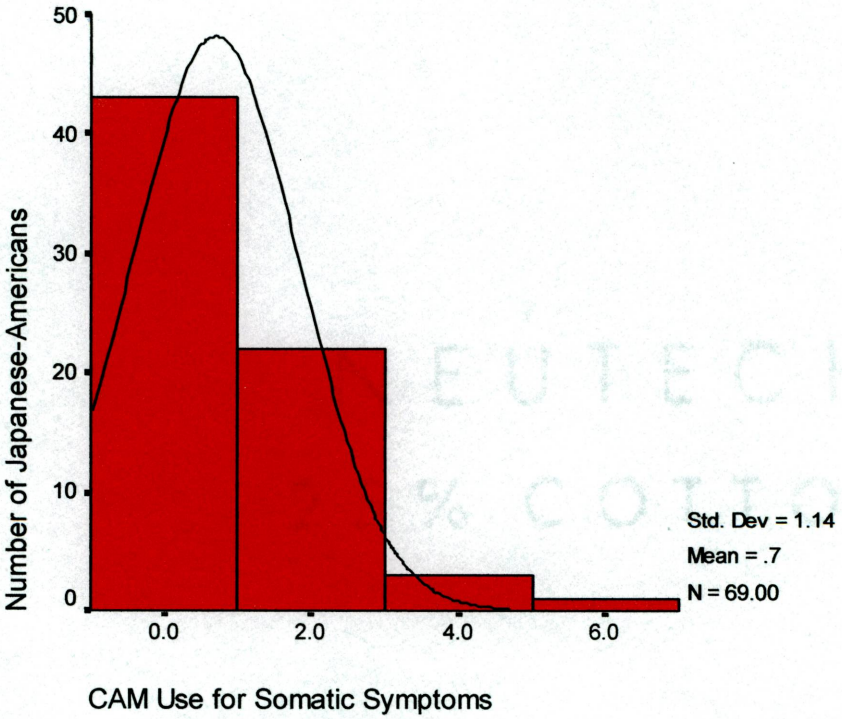
APPENDIX I

DISTRIBUTION OF CAM USAGE FOR PSYCHOLOGICAL SYMPTOMS



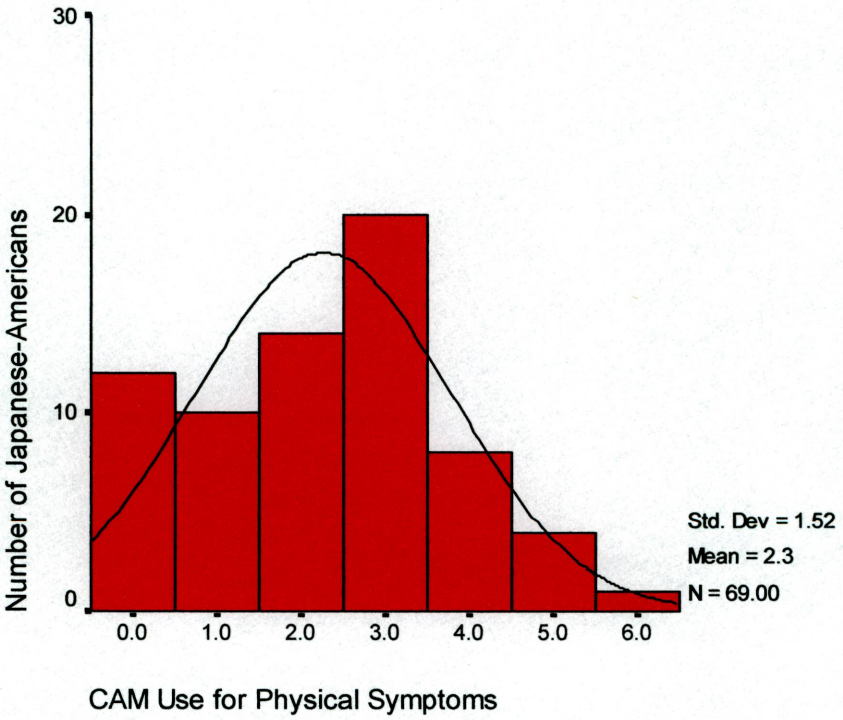
APPENDIX J

DISTRIBUTION OF CAM USAGE FOR SOMATIC SYMPTOMS



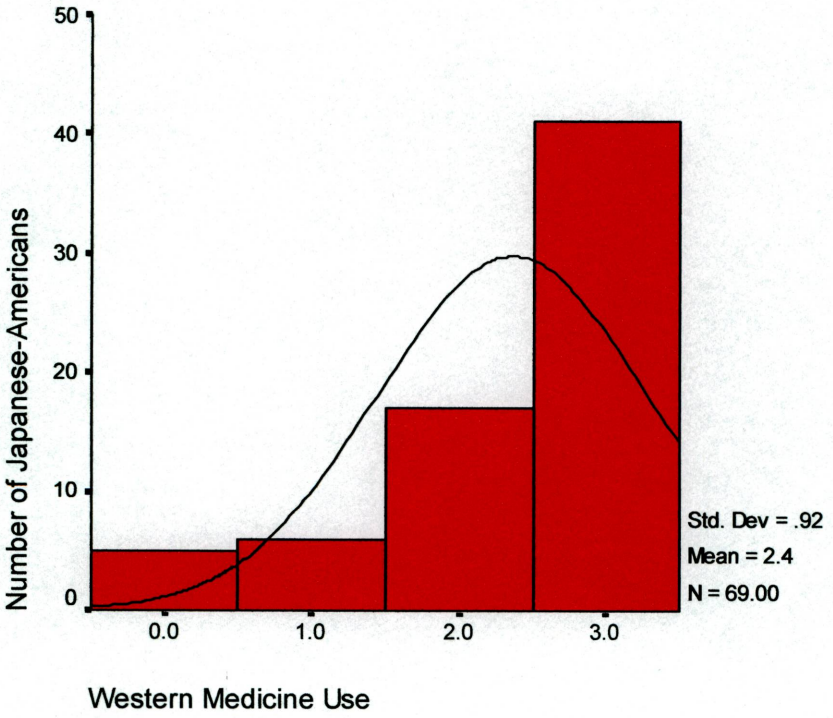
APPENIDX K

DISTRIBUTION OF CAM USE FOR PHYSICAL SYMPTOMS



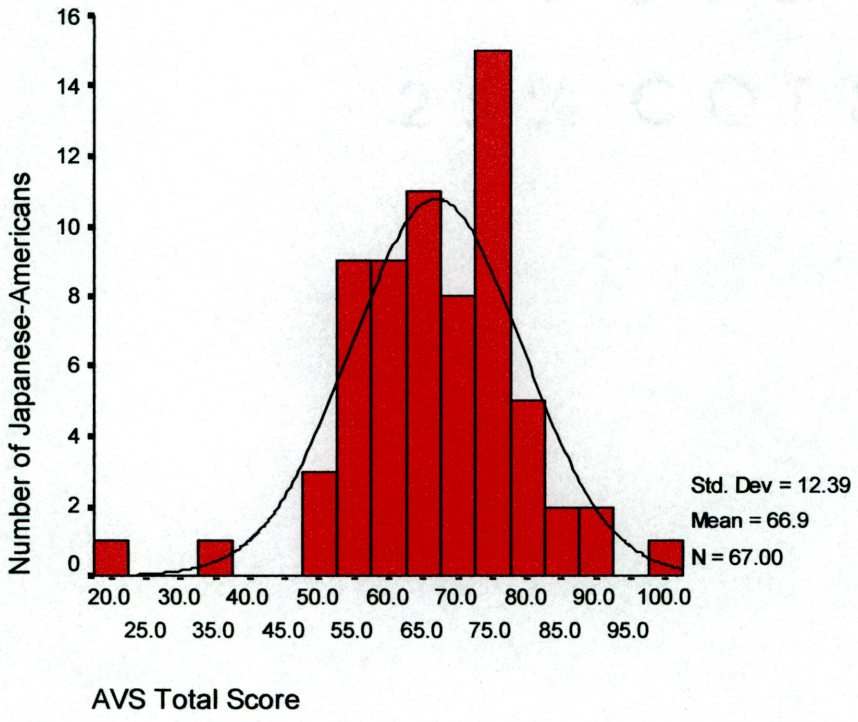
APPENDIX L

DISTRIBUTION OF WESTERN MEDICINE USE



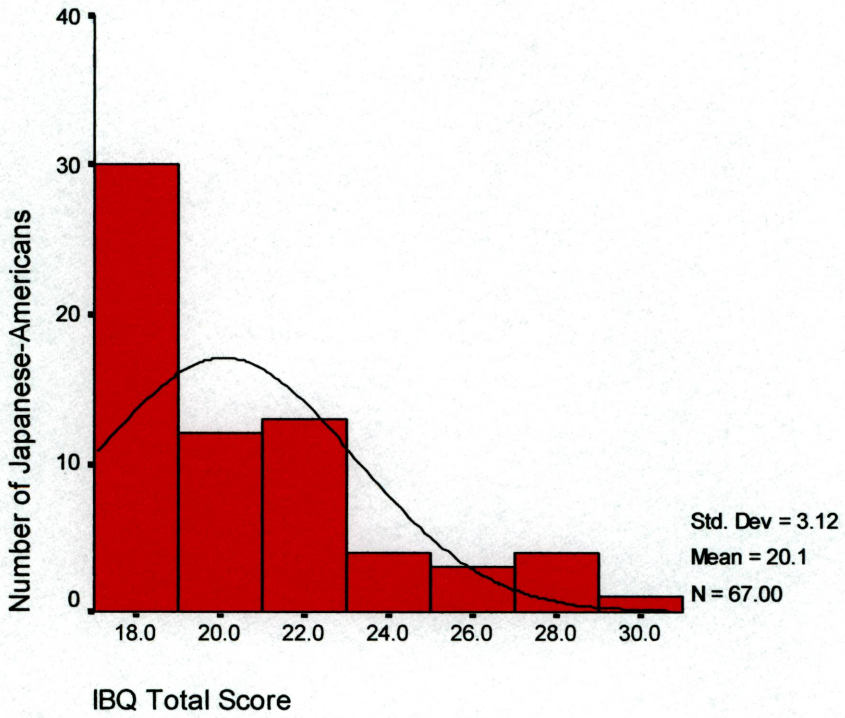
APPENDIX M

DISTRIBUTION OF AVS TOTAL SCORE



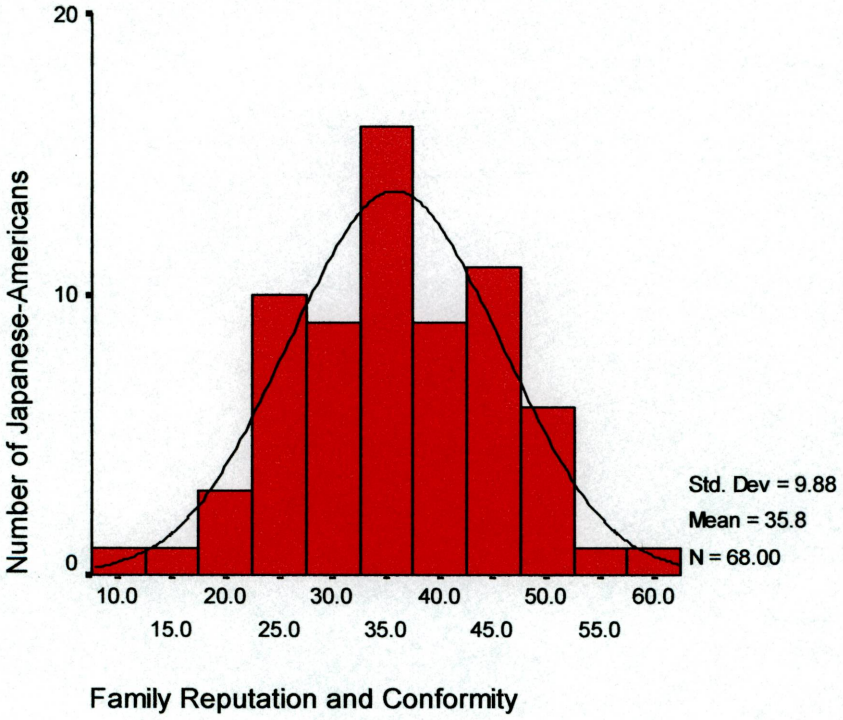
APPENDIX N

DISTRIBUTION OF IBQ TOTAL SCORE



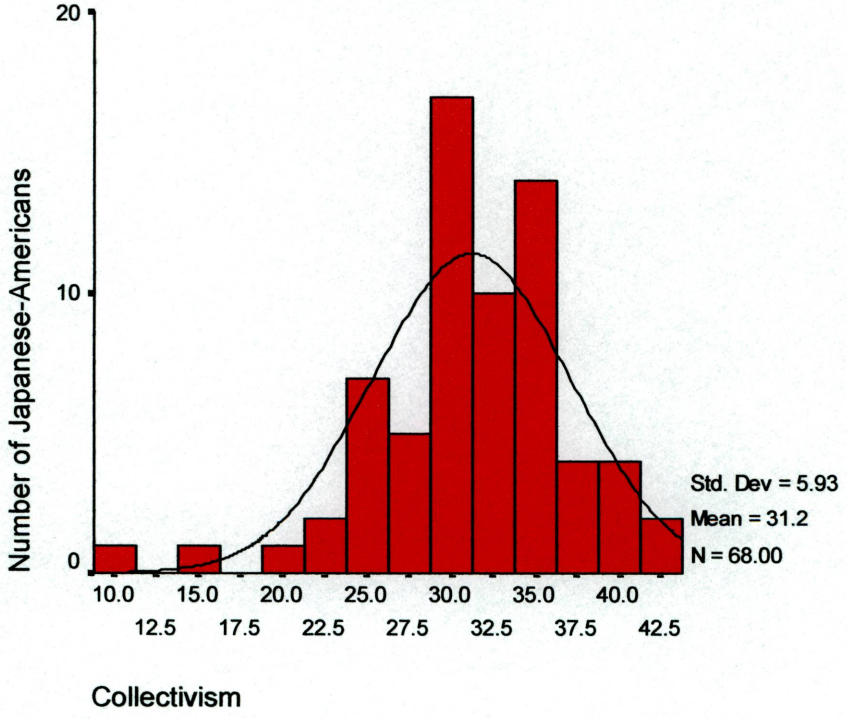
APPENDIX O

DISTRIBUTION OF FAMILY REPUTATION AND CONFORMITY.



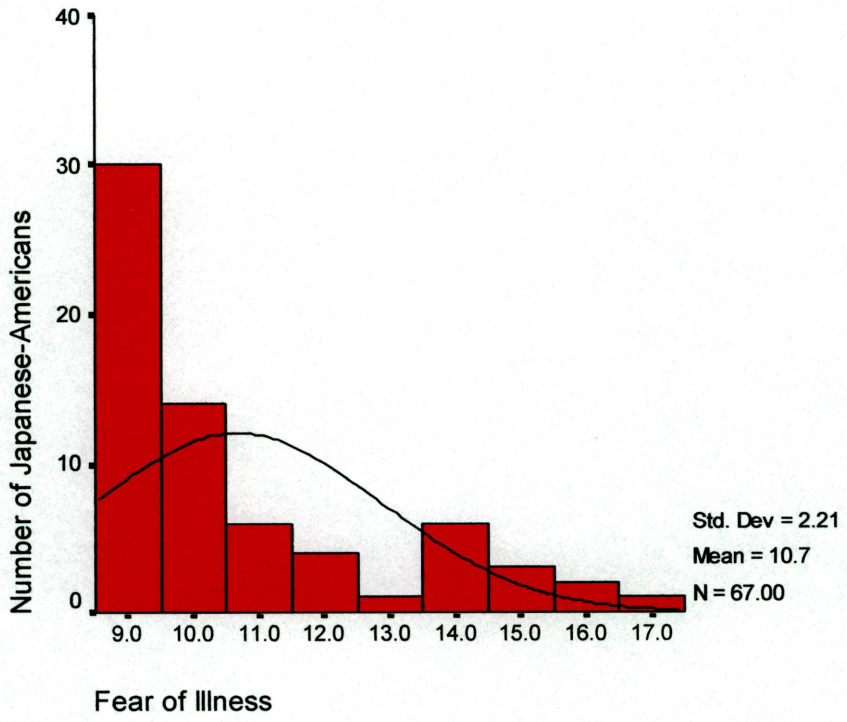
APPENDIX P

DISTRIBUTION OF COLLECTIVISM



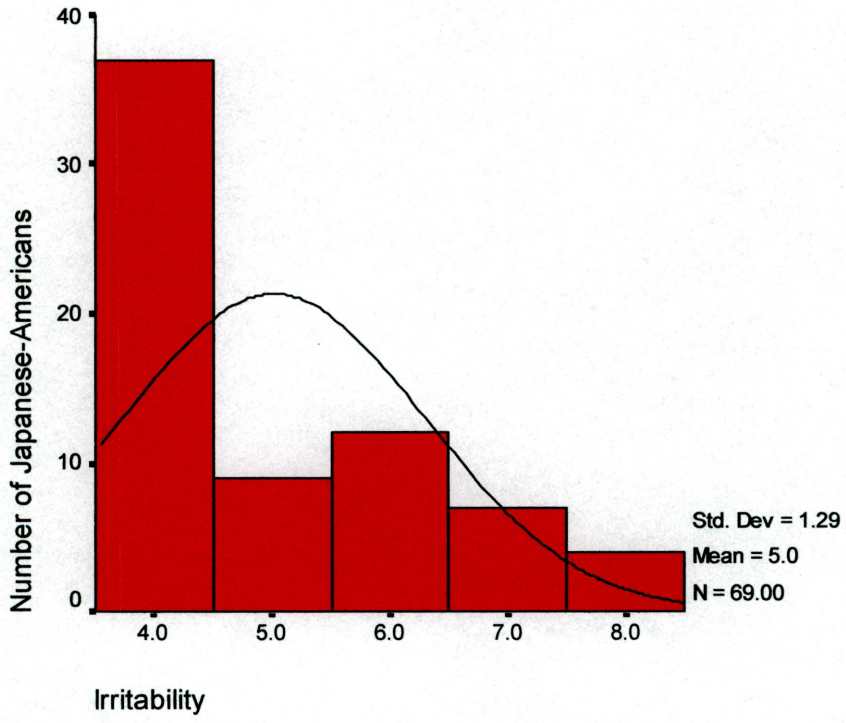
APPENDIX Q

DISTRIBUTION OF FEAR OF ILLNESS



APPENDIX R

DISTRIBUTION OF IRRITABILITY



APPENDIX S

DISTRIBUTION OF DISTRESS ABOUT PHYSICAL HEALTH